

UNIV. OF
TORONTO
LIBRARY





Digitized by the Internet Archive
in 2010 with funding from
University of Toronto

<http://www.archive.org/details/international83wash>

Med
NEW YORK MEDICAL JOURNAL

INCORPORATING THE
PHILADELPHIA MEDICAL JOURNAL
AND THE
MEDICAL NEWS

A WEEKLY REVIEW OF MEDICINE

EDITED BY
FRANK P. FOSTER, M. D.,
AND
SMITH ELY JELLIFFE, M. D.

ASSISTANT EDITORS

REED B. GRANGER, M. D.
SAMUEL M. BRICKNER, M. D.
MATTHIAS LANCKTON FOSTER, M. D.
JOHN S. BILLINGS, JR., M. D.

FREDERICK T. HANEMAN, M. D.
ANDREW F. CURRIER, M. D.
G. A. DE SANTOS SAXE, M. D.
JOHN M. SWAN, M. D.

VOLUME LXXXIII

JANUARY TO JUNE, 1906, INCLUSIVE

NEW YORK

A. R. ELLIOTT PUBLISHING CO.

1906

267336
28/4/32

R
11
I 65
v. 83
no. 1-13

Copyright, 1906.

By A. R. ELLIOTT PUBLISHING CO.

LIST OF CONTRIBUTORS TO VOLUME LXXXIII.

Those whose names are marked with an asterisk have contributed editorial articles.

- ADLER, ISAAC, M. D.
ALGER, ELLICE M., M. D.
*ARMSTRONG, SAMUEL T., M. D.
ASHLEY, DEXTER D., M. D.
AUSTIN, M. A., M. D., Anderson, Ind.
AXFORD, M., M. D., Buffalo
BAILEY, JOHN H., M. D.
*BAILEY, PEARCE, M. D.
BAKER, B. M., M. D., Norfolk, Va.
BALDY, J. M., M. D., Philadelphia.
BALLENGER, EDGAR G., M. D., Atlanta, Ga.
BALLIN, MAX, M. D., Detroit.
BALLIN, MILTON J., M. D.
BARACH, JOSEPH H., M. D., Pittsburgh.
BARNESBY, NORMAN, M. D.
*BARROWS, C. CLIFFORD, M. D.
*BASTEDO, W. A., M. D.
BECK, CARL, M. D.
BEEBE, BROOKS F., M. D., Cincinnati.
*BENEDICT, A. L., M. D., Buffalo.
BERNAYS, A. C., M. D., M. R. C. S., St. Louis.
*BILLINGS, JOHN S., JR., M. D.
BISHOP, LOUIS FAUGERES, M. D.
BLACK, NELSON M., M. D., Milwaukee.
BLACKBURN, I. W., M. D., Washington.
BLOSS, JAMES R., M. D., Huntington, W. Va.
BOLDT, HERMAN J., M. D.
BOVAIRD, DAVID, JR., M. D.
BOVÉE, J. WESLEY, M. D., Washington.
BREWER, GEORGE EMERSON, M. D.
*BRICKNER, SAMUEL M., M. D.
BRODHEAD, GEORGE L., M. D.
*BRONSON, E. B., M. D.
BROOKS, P. B., M. D., Buffalo.
BROWN, LE ROY, M. D.
BROWN, WILLIAM BEDFORD, M. D.
BRYANT, W. SOHIER, A. M., M. D.
BURNHAM, MELVIN P., M. D., Ray Brook, N. Y.
BURR, CHARLES H., M. D.
BURROWS, C. F., M. D., Boulder, Colo.
CABOT, RICHARD, C., M. D., Boston.
CAMAC, C. N. B., M. D.
CAMPBELL, WILLIS C., M. D.
CARR, W. P., M. D., Washington.
CARTER, E. C., M. D., U. S. Army.
CHANDLER, SWITHIN, M. D., Philadelphia.
CHANDLER, WILLIAM J., M. D., South Orange, N. J.
CHAPIN, HENRY DWIGHT, M. D.
*CHEESMAN, W. S., M. D., Auburn, N. Y.
CLAIBORNE, J. HERBERT, M. D.
CLARK, IRVING T., M. D., Rochester, N. Y.
CLARK, J. BAYARD, M. D.
CLARK, L. PIERCE, M. D.
CLARKE, THOMAS WOOD, M. D., London, England.
CLARY, W. F., JR., M. D., Memphis, Tenn.
CLEMENTS, H. J., M. D., Converse, Indiana.
CLEVELAND, FREDERICK A., M. D.
*COE, HENRY C., M. D.
COHN, DAVID, M. D., Buffalo.
COLE, RUFUS I., M. D., Baltimore.
COLLINS, JOSEPH, M. D.
CONKLIN, W. L., M. D., Rochester, N. Y.
COWLES, H. C., M. D.
*CRAIG, DANIEL H., M. D., Boston.
CRANCE, CHARLES T., M. D., North Tonawanda, N. Y.
*CRANDALL, FLOYD M., M. D.
CROFTAN, ALFRED C., M. D., Chicago.
CROUSE, HUGH, M. D., El Paso, Texas.
*CUMSTON, CHARLES G., M. D., Boston.
*CURRIER, ANDREW F., M. D., Mount Vernon, N. Y.
DALAND, JUDSON, M. D., Philadelphia.
DEAVER, JOHN B., M. D., Philadelphia.
DECKER, ADOLF, M. D., Chicago.
DEEKS, W. E., M. D.
DEMPEWOLFF, AUGUSTUS F., M. D.
DERR, JOHN SEBASTIAN, M. D., Charlottesville, Va.
DILLER, THEODORE, M. D., Pittsburgh.
DOCK, GEORGE, M. D., Ann Arbor, Mich.
DOLAND, CHARLES M., M. D., Philadelphia.
DONOGHUE, FRANCIS D., M. D., Boston.
DOUGLAS, JOHN, M. D.
DROZESKI, EDWARD H., M. D., Erie, Pa.
DUANE, ALEXANDER, M. D.
EASTMAN, THOMAS B., M. D., Indianapolis.
*EDGAR, J. CLIFTON, M. D.
EINHORN, MAX, M. D.
ELIOT, ELLSWORTH, JR., M. D.
ELLIOTT, GEORGE, M. D., Toronto.
ELLIS, RICHARD, M. D.
EPSTEIN, SIGMUND, M. D.
ERDMANN, JOHN F., M. D.
ESSENSON, S. J., M. D.
EVELETH, GEORGE S., M. D., Little Falls, N. Y.
*EWING, JAMES, M. D.
FISKE, JAMES PORTER, M. D.
FOLIN, OTTO, PH. D., Waverley, Mass.
*FOSTER, FRANK P., M. D.
*FOSTER, MATTHIAS LANCKTON, M. D.
*FOX, HERBERT, M. D., Philadelphia.
FRANK, ROBERT T., A. M., M. D.
FRAUENTHAL, HENRY W., M. D.
*FRIDENBERG, PERCY, M. D.
GANS, S. LEON, M. D., Philadelphia.
GARDNER, WILLIAM COWPE, M. D.
GIBBON, JOHN H., M. D., Philadelphia.
GOLDMAN, MARIE, M. D.
GOLDWATER, S. S., M. D.
*GORDON, ALFRED, M. D., Philadelphia.
GOTTHEIL, W. S., M. D.
GRANDIN, EGBERT H., M. D.
*GRANGER, REED B., M. D.
GREEN, B. W., M. D., La Aurora, Pueblo, Mexico.
GREENE, GEORGE W., M. D., Auburn, N. Y.
GREENE, W. A., M. D., Worcester, Mass.
GRIFFITH, FREDERIC, M. D.
GROSS, M., M. D.
*GUIERAS, RAMON, M. D.
GUMBINER, A. A., M. D.
GUNN, WILLIAM, M. D., Clinton, Ontario.
HAMLIN, E. F., M. D., Slatersville, R. I.
HAMMOND, FRANK C., M. D., Philadelphia.
*HANEMAN, FREDERICK T., M. D.
HARE, FRANCIS, M. D., London, England.
HARE, HOBART AMORY, M. D., Philadelphia.
HARLAND, W. G. B., M. D., Philadelphia.
HARRIS, E. M., M. D., Russellville, Ala.
HARRIS, THOMAS J., A. M., M. D.
HART, T. STUART, M. D.
HASTINGS, T. W., M. D.
HAUBOLD, H. A., M. D.
*HAWES, JAMES B., M. D., 2nd, Boston.
*HAYNES, IRVING S., M. D.
HEIMAN, HENRY, M. D.
HELPRIN, BENJAMIN EDEL, A. M., M. D.
HEMENWAY, HENRY B., M. D., Evanston, Ill.
HIBBS, RUSSELL A., M. D.
HILL, EDWARD C., M. D., Denver, Colo.
HILL, JOHN E., M. D., Akron, Ohio.
HOLDRIDGE, G. A., M. D., Foley, Minn.
HOOPER, HARRIET, M. D., Johnstown, Pa.
HOUGH, WILLIAM H., M. D., Washington.
HOWARD, WILLIAM LEE, M. D., Westboro, Mass.
HUBBARD, ERNEST V., M. D.
HUNT, J. RAMSAY, M. D.
HUNTER, JAMES W., JR., M. D., Norfolk, Va.
JACKSON, CHEVALIER, M. D., Pittsburgh.
*JACKSON, GEORGE T., M. D.
JACOBI, A., M. D., LL. D.
JACOBSON, NATHAN, M. D., Syracuse, N. Y.
JEFFREY, STEWART LEE, M. D., Yonkers, N. Y.
*JELIFFE, SMITH ELY, M. D., PH. D.
JOHNSON, FREDERICK, M. D., North Freedom, Wis.
JOHNSON, HERBERT G., M. D., Walden, Mass.
JOHNSON, JOSEPH TABER, M. D., Washington.
JONES, W. T., M. D., Natchez, Miss.
JOPSON, JOHN H., M. D., Philadelphia.
JUDD, J. W., M. D., Ithaca, N. Y.
KALISKI, DAVID JOHN, M. D.
*KEAN, JEFFERSON R., M. D., Major, U. S. Army, Washington, D. C.
*KEENAN, THOMAS J.
KENNEDY, J. W., M. D., Philadelphia.
KERLEY, CHARLES GILMORE, M. D.
KERRISON, PHILIP D., M. D.
KEYES, EDWARD L., M. D.
KINTZING, PEARCE, M. D., Baltimore
*KNOPF, S. A., M. D.
KOLIPINSKI, LOUIS, M. D., Washington.
KOPETZKY, S. J., M. D.
KRAUSS, FREDERICK, M. D., Philadelphia.
LAMELA, M. R., M. D.
LA ROQUE, G. PAUL, M. D., Richmond.
LATHROP, WALTER, M. D., Hazleton, Pa.
LEE, FREDERICK S., PH. D.
LE FEVRE, EGBERT, M. D.
LE FEVRE, R. E., M. D., Reading, Pa.
LEONARD, CHARLES LESTER, M. D., Philadelphia.
LESZYNSKY, WILLIAM M., M. D.
LEVY, J. J., M. D., Syracuse, N. Y.
LILIENTHAL, HOWARD, M. D.
LINDLEY, WALTER, M. D., LL. D., Los Angeles, Cal.
LITTLEJOHN, P. DUNCAN, M. D., New Haven, Conn.
*LLOYD, SAMUEL, M. D.
LONGCOPE, WARFIELD T., M. D., Philadelphia.
*LORING, FRANCIS B., M. D., Washington.
LUDLAM, GEORGE P.
*MABBOTT, J. M., M. D.
MAC KECHNIE, HUGH N., M. D.
MAC KEE, GEORGE M., M. D.
MACY, FREDERICK S., M. D., U. S. Army.
MAKUEN, G. HUDSON, M. D., Philadelphia.
MANNHEIMER, GEORGE, M. D.
MAY, HENRY A., M. D., U. S. Navy.
*MAYO, CASWELL A., PH. G.
McCASKEY, G. W., M. D., Fort Wayne, Ind.
McCOSH, ANDREW J., M. D.
McCRARY, LYMAN B., M. D., Woodbury, Tenn.
McDONOUGH, EDWARD J., M. D.
McRAE, FLOYD W., M. D., Atlanta, Ga.
McWILLIAMS, CLARENCE A., M. D.
MEREDITH, E. W., M. D., Pittsburgh.
*MEWBORN, A. D., M. D.
MORF, PAUL F., M. D., Chicago.

- MORGENBESSER, H., B. S., M. D.
MORTON, HENRY H., M. D., Brooklyn.
MURPHY, JOHN B., M. D., Chicago.
*NAMMACK, C. E., M. D.
NELSON, FREDERICK L., M. D.
NELSON, HUGH T., M. D., Charlottesville, Va.
NOBLE, CHARLES P., M. D., Philadelphia.
NORSTRÖM, GUSTAF, M. D.
*NORTHRUP, WILLIAM P., M. D.
O'CONNOR, BURDETT, M. D., Mackay, Idaho.
O'HANLON, PHILIP FRANCIS, M. D.
OLIVER, J. P., M. D., Caldwell, Texas.
OLSEN, EGIB T., M. D., U. S. Public Health and Marine Hospital Service.
OPPENHEIMER, SEYMOUR, M. D.
OSBORNE, OLIVER T., M. D., New Haven, Conn.
PAGE, HENRY, M. D., U. S. Army.
PERKINS, JAY, M. D., Providence, R. I.
PETERSON, EDWARD W., M. D.
*PETTIT, LEWIS C., M. D.
*PIFFARD, HENRY G., M. D., LL. D.
POLAK, JOHN OSBORN, M. S., M. D., Brooklyn.
PORTER, P. BRYNBERG, M. D.
PORTER, WILLIAM HENRY, M. D.
POTTER, WILLIAM WARREN, M. D., Buffalo, N. Y.
PRATT, CHARLES A., M. D., Enosburg Falls, Vt.
RADIN, HERMAN T., M. D.
RANDALL, JAMES A., M. D., United States Army.
RANDLE, WILLIAM H., M. D., Philadelphia.
RECTENWALD, J. J., M. D., Pittsburgh.
REISSMAN, EDWIN, M. D., East Orange, N. J.
REYBURN, ROBERT, M. D., Washington.
RINGUEBERG, E. N. S., M. D., Lockport, N. Y.
RISTLER, W. A., M. D., Allentown, Pa.
ROBBINS, F., M. D.
ROBERTS, H. H., M. D., Lexington, Ky.
*ROBINSON, BEVERLEY, M. D.
ROBINSON, BYRON, M. D., Chicago.
RODMAN, H. H., M. D., Huntington, W. Va.
ROOS, LESTER LAURENS, M. D.
ROSS, T. HAVEN, M. D., Cato, N. Y.
ROWE, J. T. W., M. D.
SAMUEL, MARY A.
*SAXE, G. A. DE SANTOS, M. D.
*SAYRE, REGINALD H., M. D.
SCHELL, J. THOMPSON, M. D.
SCHENCK, BENJAMIN R., M. D., Detroit.
SCHLAPP, MAX G., M. D.
SCHWERIN, L. H., M. D., U. S. Navy.
SCOTT, GEORGE DOW, M. D.
SCOTT, J. MCPHERSON, M. D., Hagerstown, Md.
SEMMES, RAPHAEL O., M. D., Ph. G., Camden, Ala.
*SHAFFER, NEWTON M., M. D.
SHANDS, A. R., M. D., Washington.
SHANNON, N. V., M. D., Cambridge, Mass.
SHASTID, THOMAS HALL, M. D., Marion, Ill.
SHERMAN, ELBERT S., M. D., Newark, N. J.
*SHIVELY, HENRY L., M. D.
SHOEMAKER, JOHN V., M. D., LL. D., Philadelphia.
SINKLER, WHARTON, M. D., Philadelphia.
SMITH, HARMON, M. D.
SPENCER, SELDEN, M. D., St. Louis.
SPOHN, GEORGE W., M. D., Elkhart, Ind.
*SPRATLING, WILLIAM P., M. D., Son-yea, N. Y.
STARK, MAURICE A., Goffstown, N. H.
STEELE, J. DUTTON, M. D., Philadelphia.
STERN, SAMUEL, M. D.
STREET, LIONEL, M. D., Kyoto, Japan.
STUCKY, J. A., M. D., Lexington, Ky.
SUNDELIUS, GUSTAF, M. D., Boston.
*SWAN, JOHN M., M. D., Philadelphia.
SWINEY, MERRILL A., M. D., Bayonne, N. J.
SLAUGHTER, R. M., M. D., Charlottesville, Va.
SONDERN, FREDERIC E., M. D.
TAKAKI, BARON K., F. R. C. S., D. C. L.
TALLEY, JAMES E., M. D., Philadelphia.
TALMEY, MAX, M. D.
TAYLOR, C. LOUIS, M. D., London, Eng.
*TAYLOR, HENRY LING, M. D.
*TAYLOR, ROBERT W., M. D.
THIENHAUS, C. O., M. D., Milwaukee.
THOMPSON, W. GILMAN, M. D.
TILTON, N. FAY, M. D., Marion, Ohio.
TIVNEN, RICHARD J., M. D., Chicago.
TRENWITH, W. D., M. D.
TURLEY, FRANCES C., M. D., Chicago.
TUTTLE, JAMES P., M. D.
TYSON, JAMES, M. D., Philadelphia.
VALENTINE, FERDINAND C., M. D.
VAUGHAN, GEORGE TULLY, M. D., Washington.
*VANDER POEL, JOHN, M. D.
VINEBERG, HIRAM N., M. D.
VOLK, MAX LEWIS, M. D., Central Islip, N. Y.
WALD, RUDOLPH H., M. D., Boston.
WALKER, W. K., M. D., Dixmont, Pa.
WALLACE, HENRY, M. D., Glen Ridge, N. J.
*WALSH, JAMES J., M. D.
WALSH, JOSEPH, M. D., Philadelphia.
WARE, MARTIN W., M. D.
WARREN, STANLEY P., M. D., Portland, Me.
WATKINS, V. E., M. D., United States Army.
WAY, J. HOWELL, M. D., Waynesville, N. C.
WEBB, GERALD BERTRAM, M. D., Colorado Springs.
WEIL, RICHARD, M. D.
WEINSTEIN, HARRIS, M. D.
WEIR, ROBERT F., M. D., F. R. C. S.
WELLMAN, F. CREIGHTON, M. D., Angola, West Africa.
WHITACRE, HORACE J., B. S., M. D., Cincinnati.
WHITE, WILLIAM A., M. D., Washington.
WILKINSON, OSCAR, M. D., Washington.
WILLARD, DEFOREST, M. D., Philadelphia.
WILLIAMS, HENRY T., M. D., Rochester, N. Y.
WILLIAMS, PEARL, M. D., Providence, R. I.
WILNER, ANNA S., M. D.
WINTSCH, CARL HERMAN, M. D., Newark, N. J.
WOLF, C. G. L., M. D.
*WOOD, F. C., M. D.
*WOODBURY, FRANK, M. D., Philadelphia.
*WRIGHT, JONATHAN, M. D.
WYATT, BERNARD L., M. D., San José, Mexico.
*WYETH, JOHN A., M. D.
WYNNE, SHIRLEY WILMOTTE, M. D.
YOUNG, A. D., M. D., Oklahoma City, Okla.
YOUNG, L. M., M. D., Chicago.
YOUNG, WILLIAM G., M. D., Washington, D. C.
ZENTMAYER, WILLIAM, M. D., Philadelphia, Pa.

LIST OF ILLUSTRATIONS IN VOLUME LXXXIII.

	PAGE.		PAGE.
Abdominal Hysterectomy and Pregnancy. One Illustration	1182	Interscapulothoracic Amputation. Three Illustrations ..	1182
Acute Intestinal Obstruction. One Illustration	395	Intramuscular Injections for Syphilis. One Illustration.	1343
A New Dressing for the Penis. One Illustration	63	Loop Director. One Illustration	1053
Appendicitis. One Illustration	1337	Mayo, Dr. William J. Portrait	1194
Aseptic Subcutaneous Syringe. Three Illustrations	790	Metatarsalgia. Two Illustrations	1075
Axillary and Pectoral Cicatrices. Seven Illustrations ..	1-6	Myelomalacia, Ascending. Two Illustrations	695
Boston Meeting of American Medical Association. Seven- teen Illustrations	1035-1196	Ossiculectomy in Treatment of Otitis Media. Fourteen Illustrations	339
Choricepithelioma. Six Illustrations	793	Otitic Cerebral Abscess. Three Illustrations	1289
Chronic Endotracheitis. Three Illustrations	24	Perforating Ulcers of Duodenum. One Illustration	598
Conjugate Lateral Deviation. One Illustration	650	Pericarditis with Effusion. Three Illustrations	964
Correction of Deformity from Hip Disease. Nine Illus- trations	482-485	Perinephritic Abscess. Nine Illustrations	171-176
Curvature of Spine. Eight Illustrations	592	Pulmonary Tuberculosis. Three Illustrations	914
Downes's Angiotribe. Eleven Illustrations	903	Quarter in the Oesophagus. Two Illustrations	83, 84
Dust and Bacteria in Tonsillar Crypts. One Colored Il- lustration	17	Rectal Anastomosis of the Ureters. Two Illustrations ..	1001
Enchondroma of Upper Portion of Femur. Three Illus- trations	81, 82	Renal Calculus. Six Illustrations	800
Floating Kidney. Six Illustrations	1003	Ritter's Disease. One Illustration	1185
Frontal Sinusitis. Seven Illustrations	1126	Sarcoma of Dura Mater. Six Illustrations	689
Hand Protection, in Röntgen Praxis. Ten Illustrations ..	7-11	Spirocheta Pallida in Syphilis. Two Illustrations	591
Instrument Used in X Raying a Stricture of Oesophagus. One Illustration	81	Split Figure of Eight Bandage. Three Illustrations	218
Intermittent Exophthalmus. Two Illustrations	179	Sporadic Trichinosis. One Illustration and Two Charts.	486
		Surgery of Thyroid Gland. Four Illustrations and Two Charts	280
		Thumb Sucking. Two Illustrations	1344
		Treatment of Joint Tuberculosis in Open Air in a City Hospital. One Illustration	393
		Tympanomastoid Operation. Four Illustrations	751

New York Medical Journal

INCORPORATING THE

Philadelphia Medical Journal and The Medical News

A Weekly Review of Medicine

VOL. LXXXIII, No. 1.

NEW YORK, JANUARY 6, 1906.

WHOLE No. 1414.

Original Communications.

AXILLARY AND PECTORAL CICATRICES FOLLOWING THE REMOVAL OF THE BREAST, AXILLARY GLANDS, AND CONNECTIVE TISSUE FOR MALIGNANT OR OTHER DISEASES.

By JOHN B. MURPHY, A. M., M. D.,
CHICAGO.

Untoward or undesirable sequelæ following mammary amputations and axillary dissections, as well as axillary infection, may be classified as follows: 1. Fixation of arm to chest with more or less limitation of motion. 2. Venous stasis in the arm and forearm, with œdema. 3. Lymphoedema of the arm and forearm (pseudoelephantiasis). 4. Neuralgia in arm and forearm. 5. Sensitive retracting scars.

They are and have been well recognized surgical conditions, and their avoidance and relief have given rise to much speculation. Still no definite or generally accepted procedure has been adopted. It is somewhat surprising how different surgeons have expressed themselves on these postoperative results, based both on their own and other operators' cases. I have encountered these complications in my personal experience and have noted them also as results of other operators' work.

W. T. Bull, in his excellent report of 118 cases (*Medical Record*, August 25, 1894), says: "There has been no serious after effects of these operations. Some patients are very much annoyed by a hyperesthesia of the skin on the inner side of the arm, giving place to numbness which gradually disappears. This phenomenon has been such a frequent source of complaint when the dressings are removed that I usually lead patients to expect it and promise that it will disappear." He does not mention the venous stasis or lymphoedema, as he probably did not encounter them in his work.

W. W. Cheyne, in reviewing 61 cases in the *Lancet* (London, February 15, 1896), says: "As regards the question of functional disability which is sometimes brought forward, there is really little after trouble. At first, no doubt, the patient finds that the movement of the arm is very considerably impeded, but as time goes on this becomes more free, and, ultimately, as a rule, the patient is able to do most things which she wishes. After all, even if the arm were completely useless, it would

be a comparatively small price to pay for life." Here also the œdemas and neuroses did not produce sufficient impression to cause consideration.

C. N. Dowd, in commenting on Halsted's operation (*Annals of Surgery*, March, 1898), says: "I have had the opportunity of tracing 26 patients for from a few months to nearly three years. All had good use of the arm; they could raise it so as to dress the hair; could use it in ordinary household duties, and could put the hands behind the back. There is slight loss of power in abduction, which is, however, hardly noticed by the patient. The other muscles, particularly the coracobrachialis and the anterior fibres of the deltoid, assume a function which was performed by the pectoral muscle, so the patients do not suffer materially from loss of power. One objection is the œdema, which may have been caused by stripping so long a portion of the axillary vein, but which disappears in a short time." His cases of œdema took a favorable and different course from many we have observed. It evidently was attributed by him to a venous stasis or obstruction.

Thomas Carwardine (*Edinburgh Medical Journal*, March, 1902) made very careful measurements of the axillary region with the arm in various positions. These convinced him that the abducted position was more favorable for a useful arm after the operation than an adducted one. Where he formerly had contraction of the scar and limitation he now has freedom of motion. He showed that the longer the axillary base during the healing and the closer the skin to the joint and head of the humerus to which it unites, the better the motion. If the arm be dressed in an adducted position during the healing process the scar becomes fixed to the side of the chest and subsequently contracts more and more. He makes the following points regarding increase in the range of motion to be obtained: (a) Enlarging the base of the axilla; (b) approximating the base to the apex, and (c) preventing the costal adhesions during the process of repair. These can all best be secured by dressing the arm in the extended position. Mr. Carwardine observed that the œdema also was less after dressing the arm in the extended position. He had the unique experience of observing an acute flexion of the axillary vein, caused by cicatricial contraction after an axillary dissection, shown in his drawing from the case.

A. Marmaduke Shield (*Lancet*, March 8, 1902) expressed himself as follows on results, based on his 60 cases: "In referring to the movements of

the arm and the utility of the limb on the affected side, I must say that the condition of some cases I saw a few years ago, where very extensive operations had been done, impressed me most unfavorably. The arm was practically tied down to the side by a neuralgic and painful scar, while the hand and forearm were useless and oedematous. I believe this condition is due to two factors: One, the too frequent and extensive removal of the axillary integument, and, the other, keeping the arm bound down to the side during the healing process. If the axillary integument be so diseased as to need free removal, I doubt if the operation is worth doing. In my own cases I have merely retained the arm in a sling for the first week. Then the nurse, by insertion of cushions, gradually raises the arm to a right angle with the trunk. The cushions are removed and the arm depressed; they are again inserted and the arm raised. After a fortnight, gentle active movements of the limb can be substituted and gradually increased. I regard this after treatment of the limb and the movement at the shoulder as being among the most important details in the after treatment of operations where the axilla is extensively dissected out. I believe these methods are less irksome and painful and more effective than any form of axillary apparatus or splint yet devised." The limitation of motion or the compression of the axillary vessels can rarely be attributed to excessive removal of axillary cutaneous tissue, but is due: First, to the pernicious incision and treatment of the skin; second, the adhesion of the humeral axillary surface to the costal wall, and, third, to the unprotected axillary contents which must heal to something, and usually become surrounded and imbedded in cicatricial tissue.

W. S. Halsted, in commenting on 50 cases operated by his method, says:

"As to the disability produced by the operation, it has in some cases been so slight as to be absolutely inappreciable. In most cases the arm of the side operated on has been quite as useful as before the operation. Some of the patients, when questioned, complained that they could not dress their back hair. This disability is due to the loss of skin and not to the loss of muscle. The cicatrix sometimes prevents the patient from raising the arm high enough to dress the back hair. We have twice relieved this trouble by skin grafting. In no case that I know of has the disability of which the patient complained been due to the excision of the muscle or muscles. Occasionally there has been temporary swelling of the extremities. If we permitted the arm to become

glued to the side—and this would often happen if we did not prevent it—there would be disability from fixation. We are careful, therefore, to secure a high axillary fornix. This is accomplished by means of the triangular flap of skin, which is devoted almost entirely to this purpose, and which is held in place by a carefully applied dressing. After all, disability, ever so great, is a matter of very little importance as compared with the life of the patient." Dr. Halsted's concluding remark con-

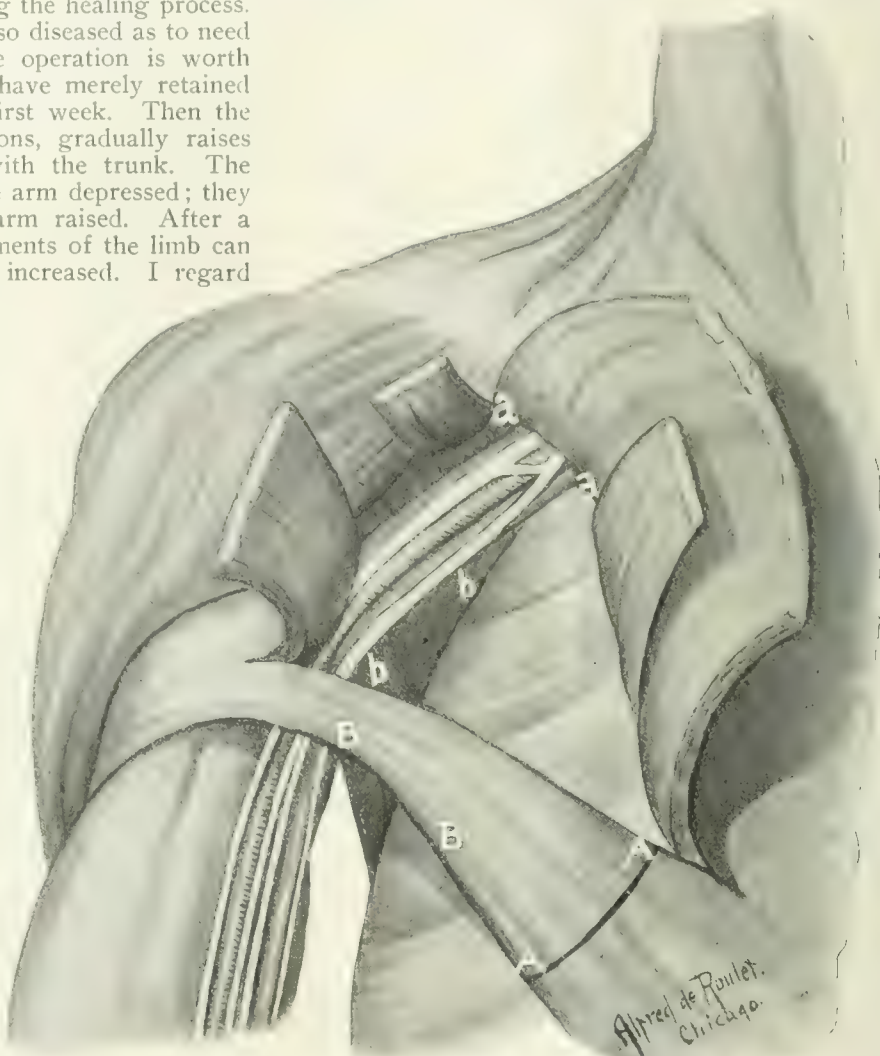


FIG. 1. Line of muscular division for pectoralis major flap. The muscle cut and split. A A to be cut.

cerning the disability is not justified if the condition contributing to the fixation and the oedema are avoidable without shortening the patient's life, and we are convinced they are avoidable as far as the cutaneous incision and flap and the cicatricial contractions are concerned. The cutaneous contraction may be avoided by the Halsted, Warren, Rodman, and Senn incision, shown in the drawings.

F. P. Maynard (*Indian Medical Gazette*, February, 1904) is more outspoken in his acknowledgments of the frequency of the condition. He says: "Every surgeon is unpleasantly familiar with the stiffness and frequency of an oedematous arm only too often left after amputation of the breast, the operation otherwise being completely successful. This stiffness is partly due to the confinement of the

limb in one position leading to adhesion to the shoulder joint, but is no doubt largely due to the axillary part of the wound during healing, while the arm is by the side. Œdema depends occasionally on thrombosis, but is more frequently due to the mode of postoperative dressing. In 1900 I found that Butlin and others applied dressings with the arm extended. The arm is kept above the head and when the patient is in bed is tied loosely with some soft material to the head of the bed. The chief advantage of this method lies in the greater and earlier mobility. Almost as soon as the wound is healed the arm can be used quite freely, and no stiffness remains. I have practised it over three years now, and in all with excellent results. Two of the patients, after amputation and clearing out of the axilla, and, of course, exposure of the axillary vein, left the hospital on the eighth and tenth day with wounds soundly healed and

incision should not be parallel to the fibres of the pectoral muscle and should not be along the anterior fold of the axilla. He follows the Warren or Mitchell Banks incision in most cases, modifying it to the individual case.

Mr. Handley believed the fixation of the arm was not due to the removal of muscle or skin, but to the fixation of the scar of the chest wall, binding the humerus in adduction.

The causes of limitation in motion, venous, and lymph stasis, and neurosis, may be classified as follows: (a) Line and position of incision. (b) Excision of skin. (c) Exposure of veins, arteries, and nerves in the operation and leaving them exposed in the excavated axilla, without muscle or aponeurosis covering, as they become involved in the cicatricial mass which must fill the cavity. (d) Malposition of arm immediately after operation—i. e., approximated to the chest wall, either for support or to lessen tension on flaps. (e) Allowing too great a "dead" space to exist between the apex and base of the axillary triangle during the process of repair. (f) An absence of accurate contact of all wound surfaces in the axilla immediately after operation. (g) Recurrence of the carcinoma in the axilla or subclavicular space.

The line of incision is of great importance in securing normal mobility after the operation. The worst results are obtained when the incision is made along the anterior axillary line—that is, on the margin of the pectoralis major muscle; as the scar contracts, it draws the arm closer and closer to the chest, thereby limiting the upward and backward motion. The central axillary line is the second in its potency for producing limitations of motion, particularly if the arm be in an adducted position after the

operation, and the axillary skin be allowed to fall a long distance from the apex of the axillary triangle. The best results are obtained by making the incision high up on the chest and rectangular; the apex of the incision just beneath the acromion process, the inner limit parallel to the fibres of the pectoral and the outer parallel to the long axis of the humerus. This permits removal or division of both pectorals and allows the greatest latitude for axillary dissection. Next to the rectangular, the sinuous incision favored by Rodman causes the least disturbance from contraction of the scar.

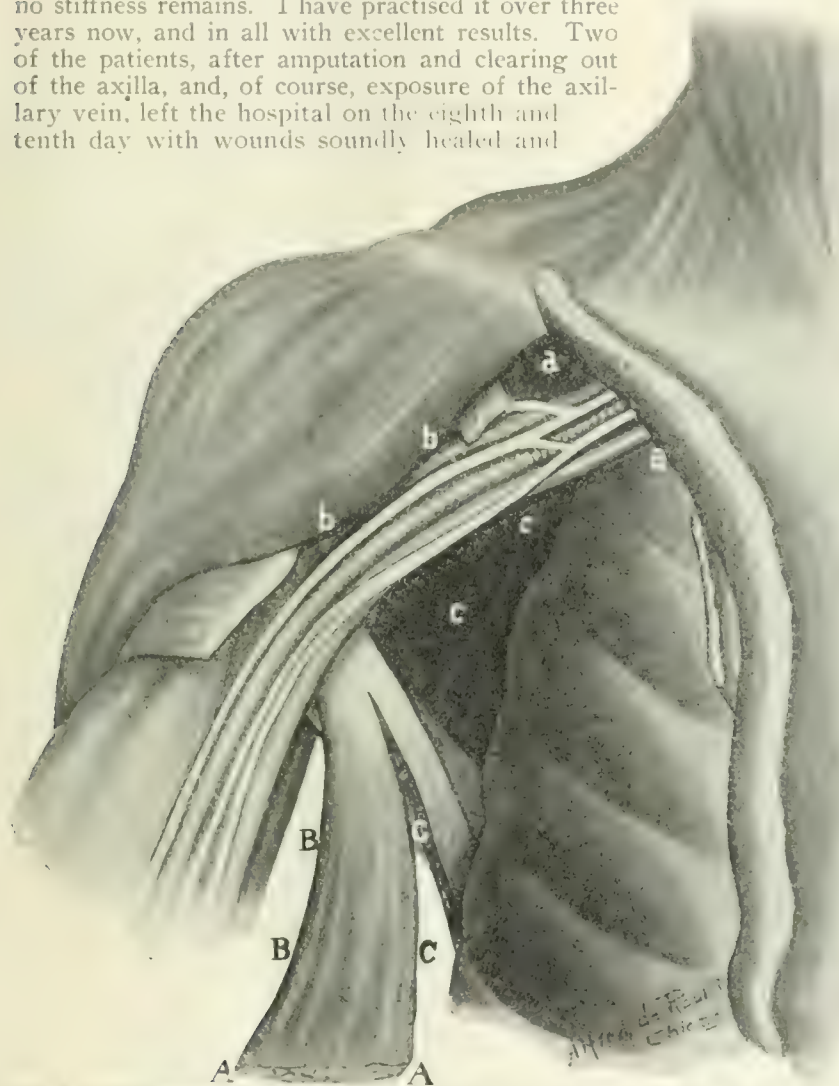


FIG. 2.—The latissimus flap prepared for turning into the axilla. A A, flap of the pectoralis to be attached to a a, B B to b b.

they were able to make their hair and use their arms with freedom."

Dr. W. L. Rodman saw no ill effects from the operation in his cases reported in his article before the British Medical Association (*British Medical Journal*, October 1, 1904), with the exception of one short scar. No œdema and no neurosis. His technique was a modified Halsted. The results were attributed by him to the lines of incision adopted. He says: The line of suture should never be a straight one; it should be sinuous, tri-radiate, or curved, so as to give a mobile scar. The

In the early stage of carcinoma the skin is not often involved, but if it is, the line of incision must be accommodated to the extent of excision of the skin demanded by the pathological condition, and semicircular flaps rolled from the chest, back or shoulder should be so formed as to cover the denuded area. These, however, should never be united so as to form a straight scar at the anterior axillary line. There has been much unnecessary removal of the skin in breast amputation, particularly where the carcinoma is deep in the glands and not at all attached to the skin, which is the rule in the early stage of adenocarcinoma. The squamous celled carcinoma of the breast always originates from the skin epithelium, and may have metastases in distant lymph spaces in the derma. However, the tendency to metastasis is not really so great as when the adenocarcinoma attacks the skin itself.

An effective dissection of the axilla cannot be made without exposing the axillary vein, axillary artery and brachial plexus, and removing all of the lymphatic chains, glands and fatty tissue. This exposure per se involves no particular risk, but if these structures be allowed to adhere to the chest, wall, or skin, or are permitted to be surrounded by newly formed connective tissue, there is always a neuritis (neuralgia), with venous and occasionally arterial, stasis. The lymphœdema, which is much more rare than is generally believed, is the result of the removal of the lymph channels. The evil results of the axillary excavation are, and have been, in our clinic, readily overcome by using a portion of the pectoralis major to cover these structures, as indicated in the drawing, or all of the pectoralis minor, or a portion of the latissimus dorsi, with its fatty covering, or even the subscapularis. Any one of the muscles which extend from the chest and are attached to the upper end of the humerus may be used (Fig. 1). The best muscle to cover the important structures of the axilla is the lower part of the pectoralis major muscle. Its aponeurosis should be removed with the breast, as the aponeurosis, and not the muscle, carries the lymphatics, in which metastasis occurs. The muscle is then cut from its costal attachments for a width of two to two and one half inches, well toward the sternal margin, and split outward parallel to its fibres, allowing the humeral attachment to remain. The remaining portion of the pectoralis major, its fascia, the pectoralis minor and its fascia, may or may not be removed, depending upon the operator's predilection in this matter. When the dissection of the axilla is complete

the pectoral flap is drawn across the nerve, artery and vein, and fixed at the apex of the axilla, covering the anterior and inferior surface of these structures. Three or four stitches suffice for the purpose, as indicated in the drawing. Two or three additional sutures may be made attaching the flap to the latissimus or subscapularis at b b (Fig. 2). If the latissimus is used it should be divided well down, two inches of its margin and fatty tissue freed and the muscle split upward towards the humeral attachment, the flap drawn forward

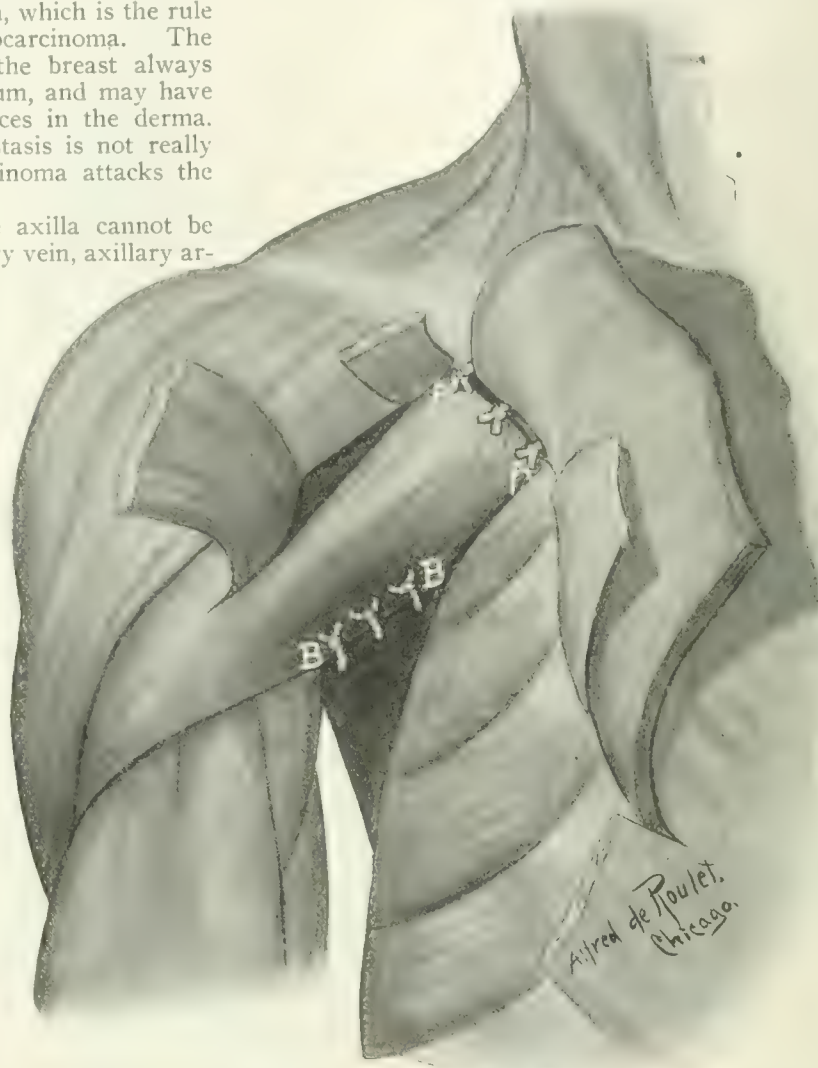


FIG. 3.—Pectoral flap placed over axillary structures. A A and B B, sutures.

and upward and attached in the same manner as the pectoralis (see drawing), to cover the axillary structures. The skin flaps are then placed in position in the usual way (Fig. 3). After these procedures there is a fullness in the axilla, but this rapidly subsides as the muscle atrophies.

When the wound is closed the arm is dressed at right angles to the body. It is held in this position by an axillary cast extending over the side of the chest and out over the arm to the elbow, as shown in the photograph (Fig. 4). The position is not uncomfortable, as one would at first imagine. In our experience the patient suffers less pain than when the arm rests against the pectoral wall. This cast also supports the base of the axillary triangle

and approximates it to the apex. It immobilizes the structure during the process of repair. It can be removed at the end of ten days, when the stitches are taken out. The evil results of fixation are due in a great degree to binding the arm to the chest wall immediately after operation. If a dead

double amputation of the breast and double axillary excavation, four and seven months after operation (Figs. 6 and 7).

Recurrence of the carcinoma in the axilla produces pressure on the vein and frequently causes œdema, presses the nerve, occasionally causing neu-



FIG. 4.—Axillary cast holding arm in proper position to body.

space be permitted to exist in the axilla after operation, the cicatricial contraction of its wall will shortly set in and draw the structures in the line of least resistance to fill the space. When the floor of the axilla is a long way from the apex the line of adhesion or contraction is between the ribs and the humerus. This can only be avoided by approximating the base and the apex of the triangle in the days immediately following the operation, as emphasized by Carwardine. There should be a perfect approximation of all the axillary surfaces when



FIG. 6.—Elevation of arm, three months after excision of the left axilla and removal of the left breast.

ralgia, but never compresses the artery sufficiently to cause a dry gangrene. The only hope of avoiding this is a careful and complete removal of all of



FIG. 7.—Elevation of arm, four and seven months after double amputation of the breast and double axillary excavation.

the lymphatic structures to the clavicular level, or even above.

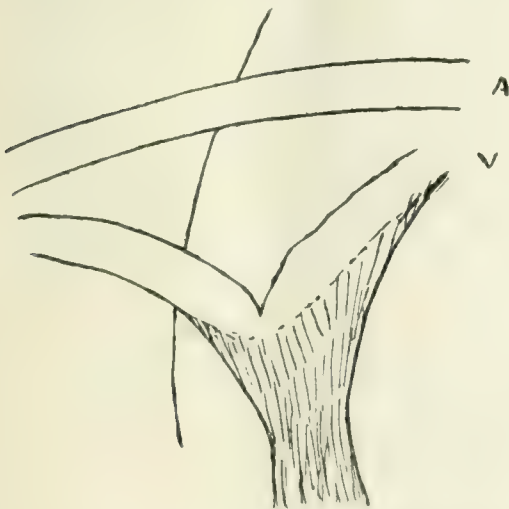


FIG. 5.—Showing scar, artery and vein.

the operation is complete and the arm is dressed and placed in position.

A photograph represents the elevation easily attained by a patient three months after the excision of the left axilla and removal of the left breast. A photograph shows the elevation attained after

The objection to the use of the pectoral muscle will be raised on the basis that it may have in it some of the cellular elements of the carcinoma and predispose to recurrence of the disease in the muscular flap. Except in the advanced stage, the muscle itself is not involved in the carcinoma, and the disease is not transmitted through it to the axilla. The lymphatics are not situated in the muscle but in the muscular aponeurosis, which should always be removed. Since Halsted's paper we are predisposed to fear recurrence of the carcinoma in the pectoral muscle. How little foundation this has is proven by the fact that Thomas Bryant, of London, in an experience of over 40 years never saw a single recurrence of carcinoma in the pectoral muscle. Personally I have not seen a recurrence in this muscle, though I have observed its involvement in the primary carcinoma. Carcinoma is not transmitted through the muscles like sarcoma, but via the lymphatics of the sheath. Therefore the muscle may be safely used in the manner described. If, however, the operator hesitates in retaining the margin of the pectoral muscle for fear of recurrence of the carcinoma in it, he can as easily use the latissimus for the protection of the axillary structures.

100 STATE STREET.

HAND PROTECTION IN ROENTGEN PRAXIS.*

By HENRY G. PIFFARD, M. D., LL. D.,
NEW YORK.

Very shortly after the announcement of the Röntgen discovery, the writer experimented with it sufficiently to appreciate the fact that he was in the presence of a force or form of energy, the true value and capabilities of which were entirely unknown and that it would be the part of prudence to desist from experimentation, at least until something further was ascertained concerning these startling phenomena. The task of unraveling the mysteries of the Röntgen ray was manifestly the part of the physicist, and was a rôle for which the writer was neither fitted by education nor equipment.

It was early obvious, however, that these rays could be turned to practical account in surgical practice for diagnostic purposes; and fluoroscopic examinations and radiographic records were made by many physicians, and by some who were not physicians.

In the earlier work, rays of but moderate and even slight penetration were alone employed, for the simple reason that the means for obtaining those of greater energy had not yet been discovered, or at least were not generally available. In consequence of this, radiographic exposures were greatly prolonged, those of thirty minutes and even more, being not uncommon.

Rays that pass entirely through a tissue without let or hindrance do not affect it, and *per contra* those that are arrested or absorbed by the tissue are the ones that affect and interfere with its physiological functions. The employment, therefore, of non-penetrating (absorbable) rays and

their prolonged impact resulted in the most serious disorganizations of the integument.

Thus far the operator had suffered but little, as he was outside the more direct lines of force, and at a greater distance; and in these prolonged exposures might be occupied with other duties beyond the sphere of influence of the rays. It required but a few fluoroscopic examinations to make evident the fact that the rays from different tubes varied in character, and in even the same tube from minute to minute. To test these variations the most convenient means was the operator's own hand. When these examinations were repeated daily, and perhaps many times a day, the operator became in turn the victim of the rays. The dermal lesions early received the name of x ray "burns," and the non-penetrating and easily absorbable rays that produce them, I shall here designate as the *caustic* rays to distinguish them from the more penetrating ones that expend their energies on the deeper tissues without appreciable damage to the skin.

We are all aware of the destructive action of these rays and most of us have seen them, but to bring the matter more vividly before such readers as have not, I refer to the accompanying photograph of the left hand of a well known American radiologist who has kindly permitted me to make use of it (Fig. 1), as a silent though vivid warning to those who may be inclined to carelessness in the matter of personal protection, or to beginners who perhaps have not sufficiently learned the lessons of the past. In this particular instance the first intimation of dermal trouble commenced five years ago. Three years later, a finger was amputated, and on the index is an open ulcer of six months' standing, now covered by a small bandage. The illustration here given, however, conveys but an imperfect idea of the ravages that have followed the incautious use of this newly discovered form of energy. Not only have fingers been lost, but also hands, arms, and even death has followed in the track of the earlier lesions.

Undoubtedly by far the most frequent cause of hand burn is the pernicious habit of using the hand for the purpose of testing the quality of the rays with the fluoroscope. It is certainly the most convenient appliance for this purpose, and is moreover the one that gives the most satisfactory information concerning the character of the rays that are being given off by the tube.

Every tube in action gives off rays of varying penetrating power, those, for instance, that are absorbed by the skin, those that go through it and are absorbed by the soft tissues beneath it, those that penetrate these and are absorbed by the bones, and finally those that may go through all the tissues and expend their energies on a photographic plate if by chance there be one in their path. Beside the x rays proper, a small proportion of cathode rays issue from the tube.¹ In addition to these we have the so called Sagnac, or secondary, rays, and finally an electrostatic field of varying intensity. Certainly the proper estimation of the various energies involved in the use of the x ray tube is by no means a simple

* Read at the meeting of the Surgical Section of the New York Academy of Medicine, December 1, 1905.

¹ Sir Oliver Lodge, *Archives of the Roentgen Ray*, May, 1904.

problem. We have as yet no clinical means of determining the amount or intensity of the cathode rays or of the electrostatic field, and absolutely no positive information as to the influence they exert on the tissues with which they come in contact. In the matter of the x rays, however, and the Sagnac rays, we are able to obtain information which at present is almost our sole guide in clinical procedures, and undoubtedly the human hand furnishes the most convenient and most instructive means at our command. It is for this reason that it has been used so much and been damaged so much.

The chief reason (other than convenience),



FIG. 1. X ray bath.

why the human hand is an admirable test object for determining the character of the rays issuing from a given tube, is the fact that it reveals the presence and enables the observer to estimate the proportion of secondary or Sagnac rays,² as well

A number of x rays in penetrating matter is gradually created, but its direct penetration progress is unaltered. Every body, however, emits secondary rays in its path gives up its direct rays, creating a secondary ray, which Sagnac does not indicate that they are derived from the primary ray, they issue from the tube. These rays in turn give rise to tertiary rays. These rays, therefore, are a direct translation of the x rays into secondary and tertiary rays. The foregoing is a free translation from an article by M. G. Sagnac (professor at the University of Lille, France) in *Boulevard's Little in science and art*, June, 1904.

It has been further ascertained by Sagnac that these rays will affect a photographic plate, and discharge an electroscope. A portion of them also are deviated by a magnetic field, and hence are assumed to be cathode rays; that is, projected electrons.

The effect of these secondary radiations in disturbing the

as the penetrating quality of the x rays proper.

It is manifest, however, that the use of the human hand as a test object must be abandoned and a suitable substitute be employed in its place. Unquestionably Benoist's radiochromometer³ affords the most accurate and definite information as to the penetrating power of the rays issuing from a given tube and in radiographic work gives the information with great precision. The form and uses of the Benoist instrument are so well known that a description of it here is unnecessary. For my personal use, however, I have modified its shape. Instead of the original circular form, I have made it linear, as shown in Fig. 2, but have preserved the essential features

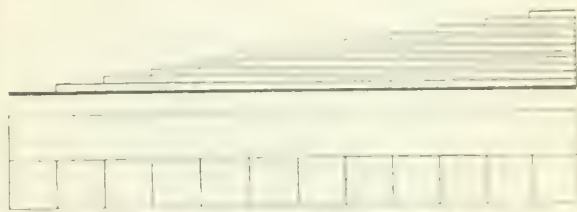


FIG. 2. The author's modification of the Benoist radiochromometer.

of the instrument unaltered. The name given by Benoist to his instrument seems a little clumsy or liable to be confused with Holzknicht's device (*chromoradiometer*). I prefer, therefore, to designate my modification as a *penetrameter*.

In using it with a fluoroscope to test the tube prior to radiographic or therapeutical application, I find it inconvenient and altogether prefer a human or animal bone as originally proposed, I believe, by Dr. Beck. A radius or ulna cut in two and the pieces mounted side by side on a thin piece of board will as readily enable us, after a little practice, to judge quite accurately as to the comparative "hardness" or "softness" of the tube.

The professional radiographer must of necessity know the conditions of his tube if he hopes to obtain satisfactory negatives, and he rarely makes an exposure without first testing the quality of the rays.⁴ Unfortunately this is not always true of the radiotherapeutist, as I know that some who practice the art, rarely if ever, take any cognizance of the state of their tubes or of the quality of the rays that issue from them. This fact readily accounts for the somewhat discordant clinical results obtained by different operators.

Whichever radiometer be employed, or whenever a tube is in action some form of protection for the hands should be employed. One of the early devices was the enclosure of the tube in a non-radiable box. This is effective, but debars the operator from inspection of the tube in operation and is not in general use. In a well be-

purty of the radiographic image has been well studied by Cole (1907), and by M. A. (1907), but a study of the on the human tissues has not as yet been sufficiently investigated.

It is well known that the shadow cast by a given thickness (0.11 mm.) of silver the shadow cast will be the same whatever be the penetrating quality of the ray. With aluminum, however, it is different, as the shadow will vary directly with the thickness of the metal. Based on these facts, Benoist constructed his radiochromometer.

It is the author's desire to suggest that the length of the parallel spark gap was chiefly relied on. This, however, is very unreliable, as with the given spark gap different tubes may give rays differing greatly in character.

haved tube the active rays are supposed to emanate from the anterior hemisphere, that is, the hemisphere of the tube whose base is parallel with the plane of the target, and a distinct division of the tube into anterior and posterior planes, can generally be obtained. It was clear, therefore, that covering the anterior hemisphere would shut off all rays coming from this part of the tube, except such as were purposely transmitted through a window opposite the target. For therapeutical purposes such a shield is desirable, as it cuts off the marginal radiation, that is, those rays that strike the tissues in a measurably tangential man-

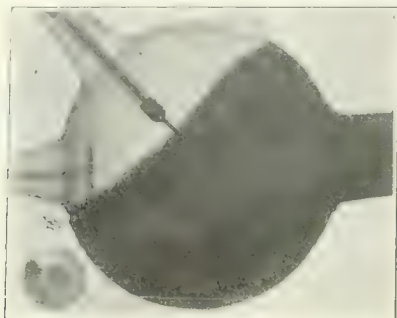


FIG. 3.—Radiograph of tube with anterior hemisphere covered with lead paint.

ner. In radiography the exclusion of these rays improves the definition of the picture, but prolongs the exposure. The well known Friedlander shield is of this description,⁵ and also one from Germany made from dense lead glass.

These shields, however, I have found somewhat inconvenient in practice and have substituted a home made arrangement, that thus far has proved fairly satisfactory. It consists in simply covering the anterior hemisphere (except a two inch window opposite the target), with a sufficient number of coats of lead paint to absorb the less penetrating rays. In the present instance (Fig. 3) twenty coats of paint were used.

The radiograph here shown was taken on an x ray plate, actuated by a 12 inch coil with a current of 8 ampères through the primary and an exposure of 45 seconds. The radiometer shows that penetration of the rays was equivalent to No. 8 on the Benoist scale.

Tested with the electroscope the ionising radiations were in the ratio of twenty through the window to one through the protected portion next adjoining the window. Taking these tests together, it is fair to assume, I think, that the protection is amply sufficient so far as the caustic rays are concerned. This statement refers of course only to the x rays that traverse the anterior hemisphere.

In many, perhaps most instances, parts or the whole of the posterior hemisphere become fluorescent, indicating the direct impact of cathode rays and subsequent emission of x rays. Such a tube, therefore, becomes nearly as dangerous from the rear as the front, and unless the tube can be coerced into better behavior, should be entirely enclosed in a nonradiable box, or completely

covered with a sufficient coating of lead paint. A tube of this character is illustrated in Fig. 4, and it will be seen that nearly the entire globe is fluorescent as also the polar extensions.

In this particular instance the tube was actuated by a coil and regulated to give "hard" rays. The regulation was then altered so that it gave comparatively "soft" rays and the result was fluorescence of the globe, but without extension in the directions of the poles.

In yet another instance (Fig. 5) we find the wild rays confined to but a limited portion of the posterior hemisphere. In many, perhaps most cases it is not always easy to determine the exact causes of this diffuse, or wild, fluorescence, but in the tube shown in Fig. 5, the cause was very clear. The tube was of the so called "heavy" anode⁶ type for use on a coil, the stem of the target being surrounded by iron tubing. The cord from the positive side of the coil was attached to the anode proper. This was connected to the target stem by a fine wire choke coil. The effect of the chokecoil is to permit only a small fraction of

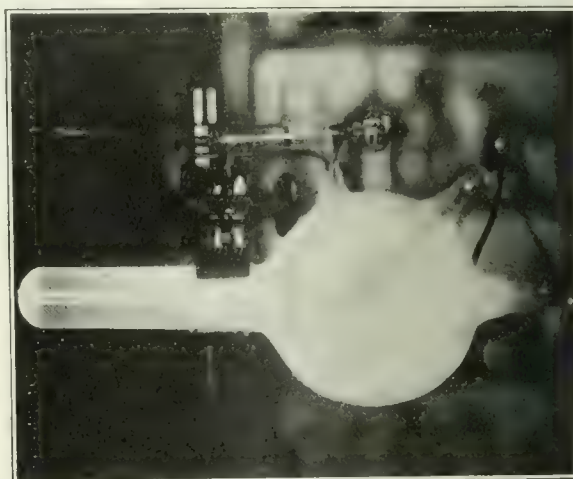


FIG. 4—Photograph of an x ray tube in action, showing the wild rays.

the current to reach the target, or at least so it is claimed.

In examining the photograph (Fig. 5), it will be observed that the anode is located opposite the iron tube of the target. When now the inverse current comes in play, the anode becomes cathode and sends out the rays in straight lines. Those which strike the iron tube generate x rays, some of which in turn strike a portion of the posterior hemisphere and produce the fluorescence. A few days later the same tube, actuated by a

⁶This name is unfortunate and misleading. It should be heavy target. In all tubes, except the cheap and comparatively useless ones, the anode is supported on a separate stem from the anticathode or target, and it makes but little difference where the true anode is situated. As a rule the cord from the positive end of the coil should be attached to the anode and only exceptionally to the stem of the target. Very often the terminals of the anode are connected by a loosely coiled wire helix. When this is done we have virtually two anodes. When a tube is properly connected to a coil and the circuit closed a current of course traverses the tube, but the interrupter instantly breaks it and a current traverses the tube in the opposite direction. It is this "break" current that we desire to utilize, and it is the "make" current that we desire to eliminate. At every flow of the "make" current the polarity of the tube is reversed. When this occurs the anode and target (if connected) project cathode rays which in turn generate x rays whenever they come in contact with the walls of the tube. This, then, is the cause of some of the wild fluorescence.

⁵Belot has recently described a similar device (*Archives d'Electricité médicale*, November 15, 1905).

coil, was photographed with the terminals of the anode and the target connected by a loosely coiled helix. In this instance there is a diffuse fluorescence over nearly the whole of the posterior hemisphere. When we operate a tube with a static machine we have no inverse current to deal with, and the tube then has two clean cut hemispheres, as shown in Fig. 6.

From the foregoing it will be seen that a tube

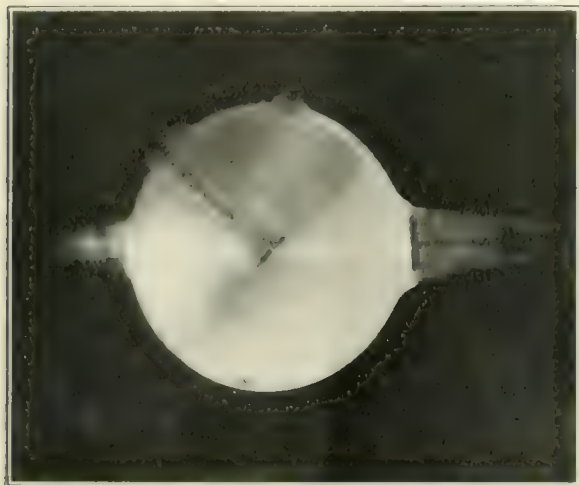


FIG. 5.—Photograph of x ray tube in action.

actuated by a coil is unsafe behind, as well as in front of the target. The usual means whereby the trouble from the inverse current can be obviated is by the use of a Villard valve. This device is largely used in France and Germany, but appears to be but little known in this country. With this valve properly connected in series with

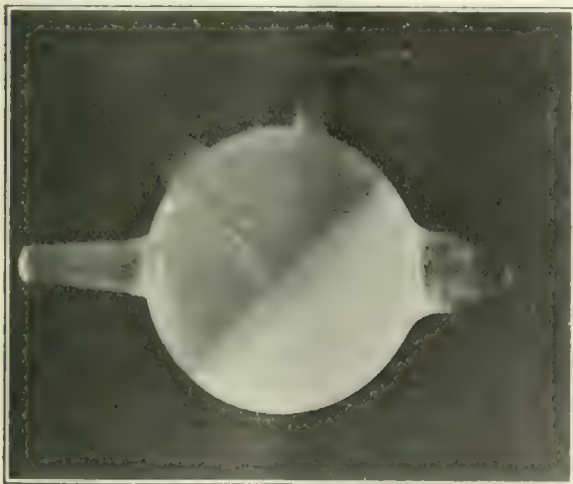


FIG. 6.—Photograph of a tube actuated by a static machine.

the tube the "break" current has free passage while the "make" current is choked off. It is said to be reasonably efficient. I regret that my own experiments do not confirm this statement. The pressing need of to-day is some device that will effectually prevent the inverse current of the coil from reaching the tube; or else a tube so constructed that the x rays generated by the inverse current shall not escape from it. It is a subject

well worthy the consideration of the radiologist and the tube maker.

A somewhat similar device, that is, one acting on the same principle, has been devised by Holtz. It consists of a vacuum tube with an anodal electrode of antimony and a cathode of carbon. A current that will pass readily in one direction is choked off if the poles are reversed. There is still another means of overcoming the effects of the inverse current. In this device the anode is concave like the cathode and focuses the cathode rays through a hole in the iron tube surrounding target support. Inside this tube the x rays are formed, but very few succeed in getting out. How practical this arrangement has proven to be I do not know. Other methods of rectification are described by Batten (*Archives of the Röntgen Ray*, November, 1905).

Naturally the ideal tube for safety would be one made of glass having a high refractive index with a suitable window in it of glass with low refractive index; in other words, the main bulb of lead glass and window of soda glass. There appears, however, to be some insurmountable difficulty in making tubes of the larger sizes (six and seven inch tubes) such as are commonly used in this country for radiography and therapy. Bulbs

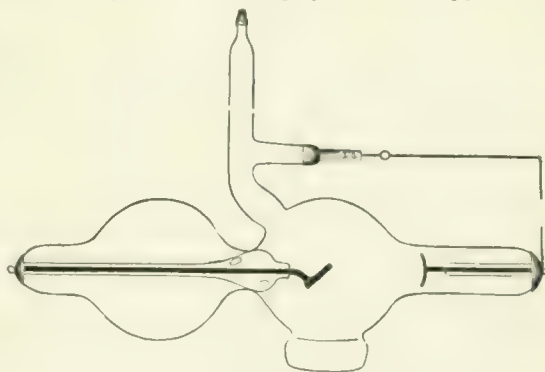


FIG. 7.—The author's safety tube.

of four inch diameter can be readily obtained and two such may be joined as in the writer's therapeutical tube for the treatment of dermal lesions as described in the *New York Medical Journal*, July 15, 1905.

It is of course understood that such a tube is not adapted to the treatment of deep lesions or for radiography. For its intended purpose it should be actuated by a current of moderate intensity, and maintained at low vacuum, most readily secured by some form of automatic regulation. Nonradiable glass extensions can be attached to the main tube for the treatment of lesions in cavities.

I do not, however, consider it good practice to use these extensions in the treatment of superficial lesions. It is much better to protect the parts with sheet lead.

When the lesions to be treated are of but limited extent Stern's unipolar tube (*Archives of the Röntgen Ray*, September, 1905) which is connected to a coil through the medium of a transformer or resonator, will render very efficient service. This tube fitted with an insulated handle can be used for surface applications or introduced into cavi-

ties; and has given me good service in a case of epithelioma of the tongue and in one of leukoplakia of the buccal cavity. In neither of these cases would an x ray tube of the ordinary type have been practicable. Although the volume of rays given off by this tube is small, its efficiency is beyond expectation due to the fact that the "business end" of the tube is applied directly to the lesion instead of at a distance of several inches. The tube is commonly made from ordinary glass, and but for special requirements, may be constructed from lead glass with soda glass window. Even without such protection I deem it perfectly safe so far as concerns the operator.

Still more efficient is the bipolar miniature or hand tube, devised by Dr. Herman Besser, of this city. The body of the tube is made from lead glass with a window of ordinary glass, and may be constructed in almost any conceivable form. One form is here shown, Fig. 8.

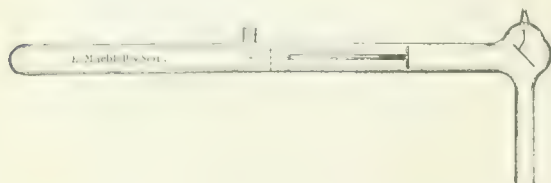


FIG. 8.—Dr. Besser's bipolar hand tube.

The tube performs well when actuated by a static machine or through a suitable condenser or transformer connected with a coil. It should be used only with moderate current and adjusted to give soft or medium rays. Neither this nor any of the lead bulb tubes so far constructed will do the heavy work of the ordinary large tubes.⁷ For its weight and inches, however, it is certainly exceedingly efficient and will enable x ray applications to be made under circumstances where the ordinary tube would be either entirely unavailable or very inconvenient to adjust or manipulate.

A third form of miniature hand tube has recently been devised by Machlett. It is intended to combine the special excellencies of the other miniature tubes, taking from each that which seemed best. As yet I have not had an opportunity of giving it a practical trial, other than to test its efficiency and convenience. It can be made either with a permanent tip or a removable one, as shown. Personally I should prefer the first named construction. On looking at the diagram (Fig. 9) it will be seen that it has the advantage of the supplementary bulb as found in the writer's larger safety tube. This Machlett tube is made of lead glass, with a crown glass window and works from a static machine as well as from a coil.

In the foregoing I have endeavored to show how the rays from the anterior hemisphere may be confined to the parts that we desire to act on

The construction of a lead glass bulb with a permeable window I believe is an English invention and is patented, I am informed, in England and Germany, but not, so far as I am aware, in this country. Thus far it has not been found practicable to make the tubes with bulbs of more than four inches diameter nor of an opacity sufficient to eliminate the more penetrating rays. The opacity, however, should be sufficient to neutralize the caustic rays. A simple test with a fluoroscope, or, better, with an electroscope will enable the purchaser to decide for himself whether the tube will meet his requirements in this respect.

or to traverse, and to their immediate neighborhood; to point out some of the causes that lead to the production of the wild rays, and to indicate the means whereby they may be measurably controlled. This, however, is not in my opinion altogether sufficient, and it is the part of wisdom to further protect the hands themselves by some non-radiable covering. Gloves composed in part of rubber and in part of lead may be readily purchased, but such as I have seen and used were clumsy and inconvenient and were very soon abandoned.

In place of these I have prepared a hand made substitute that I find much more satisfactory. To

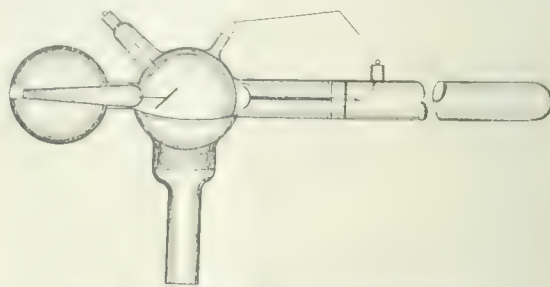


FIG. 9.—Machlett's bipolar miniature tube.

that end I took an old pair of driving gauntlets that were well worn and flexible, and applied six coats of white lead paint to their back, leaving the fingers unpainted. I then radiographed the glove, as shown in Fig. 10. The result satisfied me that the protection was sufficient and I then painted the fingers. After a month's use the paint begun to show signs of wear and a few little fissures appeared. This was remedied by an additional coat of paint, and this is renewed whenever occasion requires. This of course is somewhat of a bother, but not quite so much of a bother as the application of salves or lotions to a pair of burned hands.

Addendum.—Body protection, that is, protection against the deeply penetrating or sterilizing rays is of but little moment to those who make but occasional use of the rays, but the professional radiologist has already learned that still more strenuous measures are needed. Briefly, if using a coil, means must be taken to obviate the wild rays generated by the inverse current. In addition

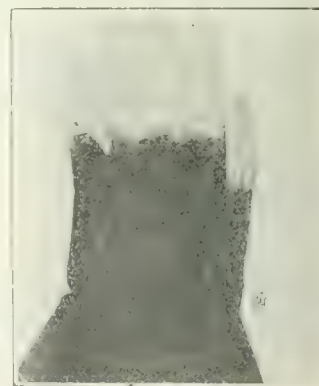


FIG. 10.—The author's paint protected glove.

to this, it is wise to enclose the entire tube in a nonradiable box or to interpose a movable protecting screen between the tube and operator. The lower part of this screen should be covered with sheet lead, while the upper part is furnished with a window of dense lead glass. Such boxes and screens can be obtained from any of the deal-

ers in electrical apparatus. Some radiologists arrange the tube and patient in one apartment, while they themselves occupy an adjoining one, protected by lead and with a lead glass window, the rheostat and switches being controlled from the protected room. Personally, simply as a matter of convenience I keep a brick wall between myself and the patient during the exposure and observe the behavior of the tube by the aid of a mirror and turn the current on or off as may be required by means of a floor push. With an automatic tube properly adjusted for the special work to be done, there is rarely any occasion to enter the operating room during the time of exposure. As I rarely have occasion to practise radioscopy for diagnostic purposes, I have no special advice to offer those who do, except possibly the use of the movable screen with the fluoroscopic screen next to the lead glass window and, of course, between it and the patient.

256 WEST FIFTY-SEVENTH STREET.

PROFESSOR F. BLOCHMANN'S WORK ON ACCIDENTAL VACCINATION.*

By GEORGE DOCK, M. D.,

ANN ARBOR, MICH.,

PROFESSOR OF MEDICINE IN THE UNIVERSITY OF MICHIGAN.

One of the most important contributions on the danger of vaccination has been written by a layman, who is not an antivaccinationist. It is also one of the most interesting and unquestionably the most pathetic. F. Blochmann, the well known zoologist, had the experience of seeing his youngest son lose an eye as the result of accidental vaccination. He did not blame the attending physician, at least in the usual way, nor did he become an antivaccinationist. With characteristic "Forschergeist" he investigated the questions involved: Whether the result was due to pure accident, or to insufficient care on the part of the attending physician; and whether it could have been avoided. He has put the results of his experience in a pamphlet of about 90 pages. He shows that it could have been avoided, and easily, had the knowledge of the possibilities been properly brought before medical practitioners and the public. Thus, he proves that: 1. The directions for the treatment of vaccinated persons are insufficient. 2. Many physicians have a very imperfect idea of the dangers of vaccination, because special works on the subject, also those on children's diseases, etc., are too superficial. 3. Neither vaccine officials nor writers of popular works on medicine take sufficient pains to enlighten the public on the dangers of vaccination.

Blochmann's method was comprehensive. He first talked with medical acquaintances about the case in his own family, getting "many contradictory views, but little positive." He then studied compends of vaccination, textbooks on diseases of children, on internal medicine, encyclopædias, and systems—all were unsatisfactory. He then investigated the original records of acci-

dental vaccination, learning much, but discovering that these cases are little known and still less used.

The case of the author's own child is in brief as follows:

Boy, born January 6, 1901. Grew well, but from the third month had slight eczema, which healed on the body but remained chronic on the face, so that the general health was good, but there were slight indications of rickets. On October 21, 1901, an older brother was vaccinated. Pustules developed normally, but ruptured and were protected by a bandage changed daily. November 3d or 4th the younger child began to ail, grew restless and tried to scratch itself. From the 10th to the 12th pustules developed on the face, wrists and hands, thigh, and abdomen. The whole face was swollen, the right eye tightly closed. November 13th the child managed to get one hand free, and scratched its face so that it bled profusely. The general condition as well as that of the face became alarming, and a specialist in skin diseases was called in. He pronounced the disease vaccinia. The eyes were not involved at that time. November 20th the right eye became red and swollen. Next day the ophthalmologist, Professor Schleich, found keratitis. On the 24th perforation took place, followed by panophthalmitis. A long convalescence followed, leaving the skin deformed by scars on the face, even in places where there had been no eczema. Incidentally, the woman who washed the bandages acquired two pustules on the wrist, diagnosed as vaccinia, and leaving typical scars. The exact mode of infection in the child's case was not known. As the children were together in the daytime, casual infection could easily have taken place, and was most likely.

In discussing vaccinal injuries, Professor Blochmann shows that some are unavoidable, such as early erysipelas. Others are avoidable. A single case of this class is too many. The responsibility for the avoidable accidents he puts upon the State. Since the State carries out compulsory vaccination, which he admits is proper, it has the obligation of using all the means whereby avoidable accidents shall be prevented.

In his search of the original literature, in order to find out how many avoidable cases were known, the author limited himself to the 24 years from 1880 to 1903, during which time 140 cases of vaccinal infection were reported. In almost all, recently vaccinated children, that is, persons who could not be expected to carry out protective measures, furnishes the infectious material. In 120 cases, adults or older children were the victims, and as it appears, became infected because no efforts were made to protect them. In 61 cases in adults and older children the eyes were seriously involved, 9 resulting in severe disturbance or complete loss of vision. Mothers, nurses, and housemaids were most often affected, mothers in 65 cases, 30 involving the eyes, 9 the genitals. In 20 cases unvaccinated children were affected, some of the severest being in previously healthy children. In one, with skin previously intact, the disease was mild, but left an ugly scar. In the other 19 cases the children had eczema, the vaccinia became widespread, and death occurred in 5. In another case ulcerative keratitis followed, fortunately, as Blochmann adds, ending fatally. The high mortality in these

* Ist die Schatzkammer und mit aller Sicherheit von Kärnten umgeben. Einmal ist es ein mit Verlust des Lebens. Von F. Blochmann. Dr. phil. und o. o. Professor der Zoologie in Tübingen. Mit 2 Tafeln. Tübingen. Verlag von Franz Nebecker. 1904.

cases, equal to that in severe variola, is very suggestive, for of course the deaths should be ascribed to the vaccinia and not to the eczema.

It is obvious that the reported cases of accidental vaccinia represent only a fraction of all that occur. Felkin, for example, who has reported 9 cases observed in eight years, says he has seen others, but made no notes of them. It must be remembered that even in Germany, where the regulations regarding vaccination are in general so admirable, accidental vaccination, unlike accidents following vaccination, is not notifiable, and cases get into the special vaccination reports only by chance and often, as shown by the case of the author's child, very imperfectly or incorrectly described.

It is hardly possible at this time to speak more in detail of the cases, but it is worth while to follow the author further in his investigation of the cause and prevention of such accidents. His view as to the responsibility of the State is rather incomprehensible to us, who are in our own estimation the State. We are accustomed to enacting laws for innumerable purposes, but we have not yet reached the stage where we can pass and carry out far reaching laws for the protection of life and health. It, therefore, seems strange to see the subject of one despotic country quoting Professor Grassi, the subject of another monarchy, with approbation. Grassi says: "One of the fundamental functions of the State is to protect its citizens in every possible way against every possible danger."

Blochmann clearly sets forth how in Germany laudable improvements have been made in the preparation of vaccine, in order to lessen the danger of syphilis, erysipelas, and other inoculable diseases. Explicit directions have been given for the operation, so as to prevent secondary infection. These directions usually do prevent accidents in the vaccinated, but little has been done to prevent danger to health and life through the vaccine matter itself. No intimation is given that the vaccine lesion contains material easy to communicate to others; that fingers, towels, bandages, etc., may carry dangerous matter capable of setting up severe or even fatal disease. Blochmann thinks that the regulations should require that hands be disinfected after as well as before dressing the lesions; that the official publications, as well as others, concerning vaccination should make it clear both to the operators and the parents that certain risks may not be taken without most serious danger. So, in regard to skin diseases, the regulations advise against vaccinating when these exist, but this is often neglected, and no effort is made to protect others with skin diseases who might be exposed to the vaccinated. The climax is reached when in practice the decision is often left to the mother whose knowledge of the subject is even less than that of the official vaccinator. Much space is still given in various works to the subject of vaccinal syphilis, but this does not appear to have caused any serious accidents in Germany in the last twenty years, in striking contrast to the accidents especially studied in the present work.

Blochmann cites at length the various works

that should set forth the danger and prevention of accidental vaccinia. These are all books "made in Germany," but it is obvious that other countries have no advantage in this respect. In our own, where ideas regarding vaccination are so chaotic, it seems especially useful to call attention to the matter so clearly set forth in the little book of Professor Blochmann. The cases gathered from the literature are tabulated so as to be easily analyzed. Thirteen pages of references make the study of originals more available than has been done in any other work on the subject. Altogether the work is one that deserves the grateful thanks of the medical profession. If it also assists in advancing the knowledge of vaccination among others, so as to improve the practice of that important protective measure and make it as perfect as possible, the author and his most unfortunate little boy will deserve places high among the roll of those who served their fellow men.

300 SOUTH STATE STREET.

PATHOLOGY AND DIAGNOSIS OF MYOCARDIAL INFLAMMATIONS AND DEGENERATIONS.*

By JUDSON DALAND, M. D.,

PHILADELPHIA,

PROFESSOR OF CLINICAL MEDICINE IN THE MEDICO-CHIRURGICAL COLLEGE, PHILADELPHIA.

The comparative importance of myocarditis to other pathological changes in the heart muscle steadily diminish as knowledge increases, and in this respect resembles the progressive changes that have taken place in recent years regarding our concepts of encephalitis. Formerly most of the morbid changes in the myocardium were believed to be inflammatory, but more recent investigations show that most of the more important chronic affections of this muscle are true degenerations. The relation of inflammation to degeneration of the heart is most complex and confusing. Either may exist independently or one or the other may precede or follow, or both may occur simultaneously.

A satisfactory classification is difficult, as various lesions merge into one another. Two great groups may be recognized—the inflammations and degenerations—each of which may be acute or chronic, circumscribed or diffused.

According to Camac, myocardial diseases may be grouped clinically as: (1) Acute; (2) chronic; (3) systemic; (4) mechanical, all of which may be classified under insufficiency of the heart, with or without valve murmur.

Myocarditis may occur as an independent affection or in association with fatty and other degenerations. It may be acute or chronic, circumscribed or diffused. The intermuscular connective tissue is swollen and infiltrated with small round or spindle shaped cells and leucocytes. The blood vessels are dilated and their walls show proliferative thickening. The muscle fibres are usually degenerated and become granular, opaque, and lose their striæ. Occasionally segmentation has been observed. The

* Read by invitation before the Philadelphia County Medical Society, December 13, 1905.

muscle fibres may undergo fatty, and occasionally the hyaline degeneration of Zenker. Myocarditis may be caused by the toxins of typhus, typhoid fever, scarlet fever, diphtheria, rheumatism, gout, acute, chronic, or recurring endocarditis or pericarditis, gonorrhœa, malaria, pneumonia, influenza, or streptococcus amygdalitis, and may be occasionally provoked by prolonged intestinal toxæmia.

Suppurative interstitial myocarditis, or abscess of the heart, was first recognized in the fifteenth century by Benivieni. This process may be acute or chronic, and as it is ordinarily embolic the abscesses are usually multiple. The most frequent cause is ulcerative endocarditis, although it may be induced by any of the causes that produce pyæmia. These abscesses vary in size from a mere point to a small hen's egg. Perforation may take place into one of the cavities of the heart or pericardial sac, which in turn may be followed by aneurysm, rupture, or hæmopericardium. As a rule death occurs, although rarely the pus becomes inspissated and later encapsulated.

Chronic myocarditis is usually circumscribed, although it may be diffused and is induced by the continued action of the causes of acute myocarditis, or as an end result. It is not infrequently observed in arteriosclerosis and endarteritis, especially the obliterating variety due to syphilis. It is frequently combined with myocardial degeneration and has been described by Huchard as dystrophie sclerose. Certain forms of chronic myocarditis have been observed that were primarily periarterial or perivenous in origin.

Acute parenchymatous degeneration of the myocardium was first described by Virchow as an inflammation. This process is a true degeneration, although it occurs in myocarditis. The heart is unusually soft and pale and the entire organ is involved, more especially the left ventricle. Histologically, there is degeneration of the muscle fibres, which are finely granular, which granules resist the action of ether and are dissolved by acetic acid. When the process is well advanced the striæ are invisible. Associated interstitial myocarditis is sometimes observed. This process has been found in typhoid fever, typhus, diphtheria, variola, rheumatism, and other infections, the active agent in all probability being a toxine elaborated by these various microorganisms. Osler maintains that there is no ætiological relation between high fever and this degeneration.

Segmentation and fragmentation are regarded by certain authors as artefacts, or that the cement substance is dissolved by the action of unknown ferments. This condition, which has been called fragmentary myocarditis, was described by J. Renault in 1889, and soon after by his pupils, Mollard and Lepine, since which time the subject has attracted the attention of many pathologists. In segmentation the muscle fibres are sometimes separated at the cement line, but more frequently near the centre, whereas in fragmentation the fibres are fractured transversely, usually on a level with the nucleus. This condition is extremely common, and, according to McFarland, occurs in upwards of fifty per cent. of adult hearts examined. Hektoen states that the cardiac muscle fibres frequently separate into muscle cells and irregular fragments, and believes

this condition due to a disproportion between the vigor and the order of muscular contraction and muscular cohesion, and that its occurrence in a normal heart is due to excessive, vigorous, and irregular contraction. Huchard describes this condition as occurring in many diverse diseases and conditions, such as asystole from cardiopathy, myocardial inertia, cardiac hypertrophy due to Bright's disease, heart strain, etc., and is opposed to the view that it is an agonic lesion due to tumultuous and irregular heart action. Tedeschi wounded the myocardium with thermocautery and later when the animal was killed a zone of segmental dissociation was observed in the region of the cauterization. Within and about the lesion the cardiac muscle cells had undergone profound changes; nuclear gigantism, with marked deformity of the nuclei, many of which were stretched into various forms; atrophy and fragility of the muscle fibres and increase in the intercontractile protoplasm occupying intervals of the primitive cylinder. Certain French observers maintain that segmental dissociation is the last stage of a process which begins with nuclear hypertrophy followed by atrophy of the cellular plasm and later softening of the cement substance. They consider this lesion non-inflammatory and believe that it causes insufficiency of the cardiac muscle cells, which eventually leads to a fatally progressive myocardial asthenia. Evidence exists to support the belief that fragmentation is a pathological entity of unknown significance.

Chronic fibroid degeneration of the myocardium, or cardiosclerosis, has been designated by Huchard as arteriosclerosis of the heart. This condition is usually more or less circumscribed, occurring in spots, streaks or lines following the direction of the muscle fibres. This process frequently affects the cornua arteriosa, chordæ tendinæ, and papillary muscles. Certain sclerotic areas are due to infarcts. The connective tissue between the muscle layers and bundles is increased, and from pressure and faulty nutrition the muscle fibres undergo atrophy and fatty degeneration. It occurs as a consequence of certain forms of interstitial myocarditis, arteriosclerosis, endarteritis, acute or chronic endocarditis or pericarditis, chronic passive congestion and in the terminal stage of many of the hypertrophies of the heart. The most important cause of cardiofibrosis is the interference with the coronary circulation from sclerosis or valvular disease, thereby causing malnutrition of the heart muscle by diminishing the blood supply to that organ. The causes of arteriosclerosis are the remote causes of cardiofibrosis.

Four principal views have been held regarding the structures primarily affected in this disease: (1) That it originates as an inflammation of the muscle fibres, but this view, although at first popular, has been discarded; (2) that the interstitial tissue is first involved, and that the process is inflammatory, which view was first advanced by Corvisart and accepted by Bristowe in 1842, who called it cardiac cirrhosis; (3) that the process begins in the vessels as a periarteritis, extending by contiguity; (4) Huchard, Weigert, Huber, Ziegler, Leyden, and others believe that cardiac cirrhosis is a degeneration of the myocardium due to faulty nutrition, the results of diminished blood supply to the heart muscle caused by arteriosclerosis. I am of

the opinion that Huchard's view of the pathology of fibroid degeneration of the heart is the correct one, and explains satisfactorily many of the pathological and clinical conditions observed in this disease.

Sclerosis of the arteries may produce cardiac fibrosis by interfering with circulation; (1) By encroaching upon the lumen of the coronary arteries or branches; (2) by encroaching upon the orifices of the coronary arteries in the aorta when this vessel is sclerosed; (3) by diminishing or disturbing the balance of the coronary circulation when the sclerosed aortic valves permit regurgitation; (4) by producing hypertrophy of the heart in general arteriosclerosis, which hypertrophy may undergo fibroid degeneration.

When arteriosclerosis is well marked the myocardium in certain cases preserves a fair degree of functional integrity, provided the coronary vessels suffer no more than the remainder of the arterial system. Rapid thrombosis may cause myocardial malacia and slow thrombosis, sclerosis, when these processes occur in cardiac cirrhosis.

The heart may be normal in size, but is more usually enlarged, due to thickening of the walls and dilatation of the cavities. It is usually globular or conical in shape, due to the greater involvement of the left ventricle, or it may present a bilobed appearance when the right ventricle is also greatly involved. Its consistency is increased and the muscle is hard and resistant. The color of the heart is normal, excepting in the sclerotic areas, which are pure gray or yellowish and are rarely uniform in color and do not resemble the "dead leaf" appearance presented by myocarditis of acute infection. Fatty degeneration is often present and is variable as to site, intensity and extent, and may follow the vessels or envelop the heart, especially the posterior portion. It is usually more marked in dilated than in hypertrophied hearts. Huchard maintains that the heart is always hypertrophied and dilated and that the former precedes the latter, which is a terminal condition. Section of the heart reveals, in the midst of almost normally colored muscles, sclerotic areas, laticelike or in bands or starlike points, or elongated or oval islets, which may be discrete or confluent, millet seed or pin head in size, as large as a grain of corn, or even involving a large part of the walls. The color is mother of pearl, bluish, ashy, or gray. The cardiac muscle is slightly elevated about these areas, somewhat resembling microscopic infarcts. In obliterative endarteritis most of the islets of fibroid degeneration are disseminated. These areas are described as adult, the young sclerotic area resembles the adult in form and distribution, but differs in color, being of a dirty gray or yellow, and is less dense, moist, and not depressed below the surface of the surrounding myocardium.

The central portion of the heart is more frequently involved than the periphery, the order of frequency being the left ventricle, the papillary muscles of the mitral valve, the interventricular septum, the walls of the left ventricle, and, finally, the walls of the right ventricle. When sclerosis involves the septum or ventricular walls, it usually affects the inferior third of the organ, as this region is supplied by the anterior ventricular artery, a branch of the left coronary, which artery is frequently affect-

ed by vascular lesions. In 44 arteriosclerotic hearts, 31 showed marked involvement of the left coronary, in 6 cases both coronaries were equally affected, and in 7 the posterior coronary was not affected. Small lesions situated in important parts of the myocardium produce more serious symptoms than larger lesions elsewhere. As the coronary arteries are practically end arteries, when their walls are thickened and the lumen diminished or obliterated, the degenerated myocardium supplied by such a vessel receives but little nourishment from the surrounding vessels and occasionally there is produced a genuine necrobiosis.

Fatty degeneration of the heart may be circumscribed or diffused, primary, or secondary. The heart is usually enlarged, although it may be normal, and in well marked examples of the diffused form the color is grayish yellow, the muscle relaxed, flabby, soft, and friable. The unsupported heart falls into a shapeless mass and upon section the sharp edge of the cut surface is absent. The hand recognizes the presence of fat, which may be seen upon the knife or floating upon the alcohol in the vessel in which the heart is contained. From this extreme degree of fatty degeneration of the heart the amount of muscle involved may vary and even be so small as to be only recognizable microscopically. The areas of fatty degeneration are irregular in size, shape, and distribution, although they are more commonly seen in the left ventricle, the papillary and pectorate muscles, and beneath the endocardium or pericardium when these membranes have been inflamed. Frequently there is a yellowish mottling in streaks or patches. This degeneration is found in: (1) Toxic conditions, such as alcohol, phosphorous, arsenic, and sulphuric acid; (2) infections, such as acute yellow atrophy of the liver, infective fevers such as diphtheria, puerperal fever; (3) dyscrasias, such as occur in severe malnutrition from any cause, tuberculosis, cancer, diabetes, old age. Local anæmia from obstruction of the coronary artery, or severe, long continued general anæmia, from any cause, as, for example, pernicious anæmia may cause fatty degeneration.

Arteriosclerosis is more apt to produce cardio-fibrosis, but occasionally fatty degeneration is also associated. Under such circumstances the cause of arteriosclerosis may be the remote causes of fatty degeneration. Fatty infiltration and hypertrophy of the heart, from chronic heart disease, is frequently associated with fatty degeneration of the heart. The heart is usually enlarged, although it may be normal in size. The apex beat is usually invisible and cannot be palpated, the first sound of the heart is exceedingly feeble and valve like, and the aortic second sound may be accentuated. Not infrequently an apex systolic murmur is audible, due to dilatation of the left ventricle.

Fatty heart, or *obesitas cordis*, may exist: (1) As simple increase in epicardial fat, which may envelop the entire heart, or follow the grooves of the bloodvessels on the surface of the heart, and has been designated by Anders as subpericardial overfatness; (2) as an infiltration, the fat extending between the muscle fibres, occasionally as far as the endocardium, especially when the right ventricle is involved. Microscopically, the muscle fibres may show atrophy or fatty degeneration. The

heart is usually relaxed and dilated. This condition occurs in obesity with anæmia and may be inherited, or acquired by overeating or drinking, excess in alcoholic or malt liquors, in those past middle life, following a sedentary occupation. It frequently occurs in women at or after the menopause, and, according to Forscheimer, it is almost three times more frequent in males than in females. Eighty per cent. of the cases occur between the fortieth and seventieth year. Romberg believes that cardiac insufficiency in the obese is caused by the relative smallness and weakness of the heart muscle due to the disproportionate demand made upon the circulation by general corpulency and states that it usually occurs in the obese who are indolent, sedentary, overindulgent in food and drink, and whose musculature is flabby, and is especially common when anæmia is present. In the active and muscular obese individual the heart muscle increases in size in accordance with the demands made upon it by the increase in fat.

Brown atrophy of the heart occurs most frequently in senility, and also in the later stages of chronic valvular disease, tuberculosis, cancer, etc. The heart is dark red brown in color, small, hard, and wrinkled, and has been compared to a dried pear. The muscle fibres show yellowish brown pigment, chiefly around the nucleus. It is frequently associated with fatty degeneration of the heart.

Amyloid degeneration of the heart occurs in the intermuscular tissue, blood vessels, and beneath the endocardium and pericardium, and does not affect the muscle fibre. It is due to the same cause which produces amyloid degeneration elsewhere and is of rare occurrence.

Hyaline degeneration of Zenker, according to Osler, is sometimes met with in prolonged fever. The affected fibres are swollen, homogeneous, translucent, and the striæ are very faint or absent. It is usually associated with parenchymatous and sometimes with amyloid degeneration of the heart.

Calcareous degeneration of the heart is a rare disease in which the myocardium is infiltrated with lime salts.

The limits of this paper do not permit of a discussion of the relation of myocardial disease to the nervous system.

Diagnosis of Myocardial Disease.—An absolute diagnosis of the different myocardial inflammations and degenerations cannot be made, but a probable diagnosis is sometimes possible. Extensive disease of the myocardium may be present with few or no symptoms and a small lesion situated in an important part of the heart may induce urgent and distressing symptoms or sudden death. The symptoms of myocardial disease may be present and the autopsy demonstrate its absence and vice versa. Cabot's statistics show that in ten cases the autopsy confirmed the diagnosis, in three the autopsy showed no myocardial disease and in five where myocardial disease was discovered at autopsy no diagnosis was made during life. Occasionally in the midst of apparent good health death from myocardial disease may occur from asystole or angina pectoris. Cardiac weakness may be the only sign of advanced myocardial degeneration in terminal pernicious anæmia. The symptom complex may be the same in various affections of the myocardium

and the same disease may present different clinical pictures. Babcock well says that in no disease does the diagnosis depend more upon judgment and experience than in myocardial affections, the recognition of which often resolves itself into a question of probability. Many cardiac symptoms in elderly individuals are due to myocardial disease rather than to endocarditis, which is so frequent in the young. The muscles, circulating fluid, and the nerves must each be considered in the clinical study of myocardial disease.

When from any cause dilatation occurs in myocardial disease sudden death may occur or the symptoms and signs of dilatation may be the first clinical manifestation of disease of the heart muscle.

The difficulties of diagnosis are well illustrated by the following case:

The patient, a man aged 40 years, a West Indian by birth, gave a history of careless living, coupled with various excesses. He denied syphilis. When examined he complained of no symptoms referable to the heart, but showed to an extreme degree all of the manifestations of terror in anticipation of his execution by hanging the following morning. He was above the average height, well built, and was fairly well nourished. Examination showed a feeble apex beat, which was slightly displaced to the left. The heart dulness was increased to the left, the first sound was feeble and resembled the second. A systolic murmur was heard at the aortic cartilage and was transmitted into the vessels of the neck and the aortic second sound was accentuated. The peripheral arteries showed moderate fibrosis. The ante mortem diagnosis was arteriosclerosis, aortic valve sclerosis, and cardiofibrosis. The pathological diagnosis was moderate arteriosclerosis, moderate dilatation of the arch of the aorta, no sclerosis of the aortic leaflets nor cardiofibrosis, but left ventricular hypertrophy and dilatation with a normal myocardium. The weakness of the first sound of the heart was probably due to slowing of the systole from inhibition due to terror. The aortic systolic murmur was due to dilatation of the arch of the aorta.

A case that has been published in full elsewhere, under the care of Dr. Leopold, illustrates the latency of cardiofibrosis. The patient, a syphilitic alcoholic, aged 54, suffered an obscure attack of heart trouble four years before death from which he nearly perished, and afterwards remained in good health until his death. Three years before death he was examined for life insurance and was considered a good risk. Early one morning, after a wakeful and restless night, he became unconscious, with cyanosis, absence of radial pulse, heart sounds feeble and slightly accelerated, shallow respiration, absence of pupillary light reflex. In a few minutes he regained consciousness and after a movement of the bowels he again became unconscious, with complete muscular relaxation, and the attending physician thought he was dead. A partial reaction followed free stimulation. Vomiting occurred, each act of which was followed by syncope. The pulse rate was 25 to 30 per minute, cardiac sounds indistinct, and moist rales were observed over the base of the lungs. The entire skin surface was cold from beginning to end. At 8:30 a. m. the patient was conscious and stated that he felt badly, but experienced no pain. Vomiting continued and 16 hours after the beginning of the attack the patient was fairly comfortable, although there was cyanosis, cold extremities, pulse rate 55 per minute, occasionally disappearing, and contracted pupils. Three hours later the radial pulse disappeared, the extremities became cold, cyanosis deepened, respiration 45 to 50 per minute, and death occurred suddenly. The autopsy showed extreme obstruction of the right coronary

artery, the orifice of which was narrowed to a size permitting of the passage of a hair pin, and the walls throughout its entire length showed obliterating endarteritis, with the local enlargements almost occluding the lumen of the vessel. The left coronary artery showed well marked fibrosis at a point below the giving off of the left interventricular branch; the vessel was entirely occluded by a recent thrombus. The interventricular septum was occupied by a large white irregularly rounded area of fibroid degeneration, measuring 2×3.5 inches. A fleshy column passing from this region to the opposite wall had also undergone fibroid changes, as well as a portion of the wall of the left ventricle, which was aneurysmal. Sclerosis was so extreme and extensive that there could be but little doubt that at the time of the physical examination three years before death there was considerable cardiofibrosis, during all of which time there were no symptoms.

The most important symptoms of cardiac insufficiency in myocardial disease are tachycardia, irregular or feeble small pulse, gallop rhythm, dyspnoea, which may be continuous, paroxysmal, nocturnal or induced by slight exertion, arrhythmia, bradycardia, cardiac pain or distress, angina pectoris, palpitation, oedema, cough from pulmonary congestion, and Stokes-Adams syndrome. Tachycardia, feeble, small pulse, dyspnoea, and arrhythmia are symptoms that point towards myocardial disease. Krehl considers arrhythmia as pathognomonic, but others believe it evidences involvement of the auricles. Arrhythmia may be the only sign of this disease. Examination shows a weak heart, which is usually enlarged, with more or less oedema.

When, in the absence of renal disease, the symptoms of acute cardiac insufficiency occur, with or without valve murmur, in the course of the infectious fevers, pyæmia, gonococcus infection or acute pericarditis or endocarditis, together with signs of an enlarged weak heart, acute interstitial or parenchymatous myocarditis may be present. Some believe that the failure of the pulse to increase in frequency in changing from the recumbent to the sitting posture is an early sign of myocardial disease.

Huchard subdivides chronic fibroid degeneration of the myocardium into: (1) Arterial; (2) cardioarterial; (3) mitral arterial, and refers to the frequency of dyspnoea in pulmonary congestion and arrhythmia.

Bock considers fibrosis the most frequent form of myocardial disease and classifies the symptoms as follows: (1) Fatigue; (2) nervous unrest; (3) anorexia; (4) headache, which may be unilateral; (5) tinnitus; (6) small, frequent, weak pulse, usually from 80 to 90 per minute; (7) arrhythmia; (8) congestion of various organs; (9) asthma; (10) stenocardia. The physical signs are: (1) Sclerosis of the peripheral arteries; (2) pallor or cyanosis of the face or nails; (3) signs of hypertrophy and dilatation, and finally of dilatation alone; the first sound of the heart clear and the second accentuated, with a metallic tone which is especially marked when the aorta is thickened and dilated; (4) arrhythmia; (5) hypotension, 60 to 80 mm.; (6) oedema. The area of cardiac dulness is usually increased towards the left. Occasionally sufferers from this disease awaken suddenly with great fright and tumultuous beating of the heart.

Cardiosclerosis has also been classified by Leyden as follows: (1) Acute coronary disease, which may last a few days, hours, or minutes; symptoms due

to thrombosis of the coronary artery with secondary myocardial softening, rupture of the heart, sudden diastolic arrest of the heart, which latter may be due to invasion of the upper portion of the interventricular septum. (2) Subacute coronary disease, in which attacks of angina pectoris may extend over periods of weeks or months, differing in the various cases and increasing in frequency and severity with each recurrence. Death may occur suddenly with angina or slowly from asystolism. The pulse is slow and regular, and examination of the heart is negative. The arteries may be stiff. (3) Chronic coronary disease may continue for ten or twenty years by the avoidance of the predisposing and exciting causes of this affection. Some suffer from slight breathlessness, others from cardiac asthma. The most important symptom is angina pectoris. The pulse is usually regular, tense, and hard, and examination of the heart is negative. Death may occur in angina or intercurrent disease.

Fatty degeneration of the heart may be suspected during the course of acute yellow atrophy of the liver; infective fevers, such as diphtheria, puerperal fever, and in the dyscrasias, such as tuberculosis, cancer, diabetes, old age, and in poisoning by alcohol, phosphorus, and arsenic. It is especially apt to occur in pernicious anæmia. The usual signs of cardiac insufficiency may be present and Cheyne-Stokes breathing is not uncommon.

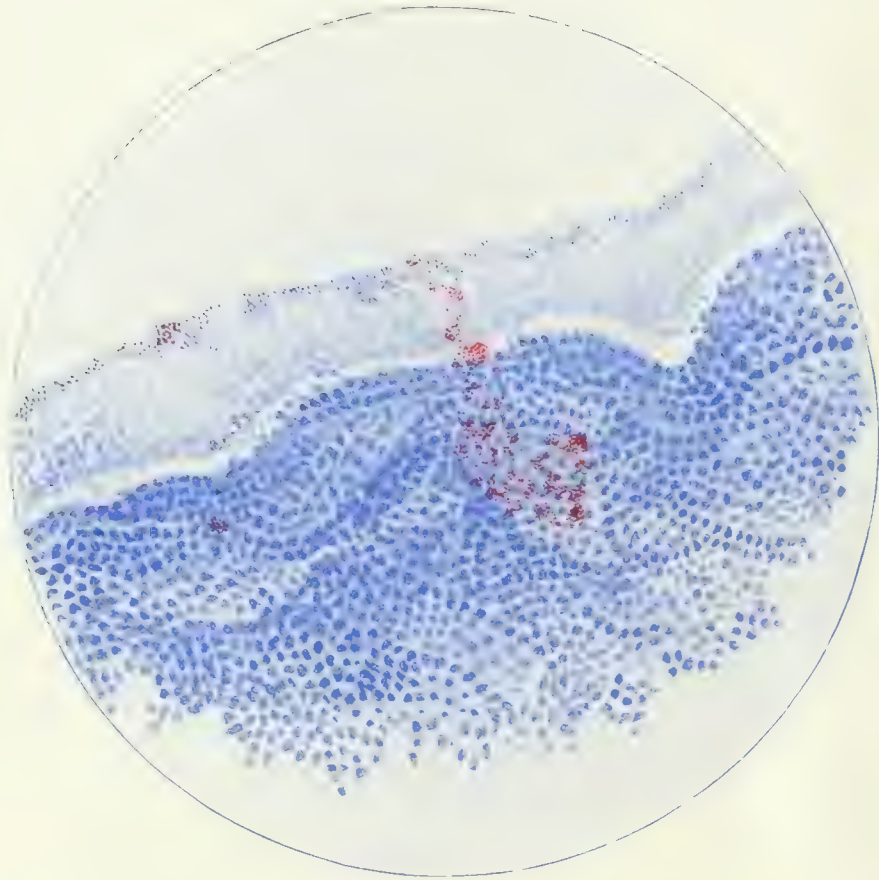
Fatty heart may occur in those who appear well nourished, with pallor or cyanosis, dyspnoea, especially on exertion, vertigo, and attacks of palpitation when at rest or after exertion. The pulse is soft, very rapid, nonresistant hypotension, and sometimes tachycardia, and in certain cases bradycardia, with the pulse rate of 48 per minute. Accentuation of the pulmonic second sound may be caused by congestion of the venous system, shown by the presence of hæmorrhoids, varicose veins, etc. The apex beat is usually invisible and cannot be felt and the area of cardiac dulness is mostly enlarged. The muscular element of the first sound of the heart may be greatly diminished; in other words, the physical signs of a weak heart.

It must not be forgotten, however, that the apex beat may be lost because of the excess of fat in the chest wall, cardiac dulness may be enlarged and widened, due to the excess of fat in the abdomen, pushing the diaphragm upwards and so placing the heart horizontal. A feeble cardiac first sound may be due to excessive fat. Dyspnoea may be due to the excess of corpulency interfering with the action of the heart and lungs.

The diagnosis depends upon the existence of obesity, the habits of the patient, cyanosis, and angina pectoris, especially occurring while at rest, bradycardia, tachycardia, and arrhythmia. Brown atrophy of the heart, when it occurs in the aged or during wasting diseases, may be suspected, when, in addition to the symptoms of cardiac insufficiency, physical examination shows a decrease in the size of the heart. When this degeneration is secondary to chronic valvular disease, the heart may be enlarged.

Abscess of the heart, segmentation, and fragmentation, amyloid or calcareous degeneration, are only recognized at autopsy.

317 SOUTH EIGHTEENTH STREET.



Carmin granules passing the epithelium of the tonsil from without, bacteria remaining on the surface.

THE DIFFERENCE IN THE BEHAVIOR OF DUST FROM THAT OF BACTERIA IN THE TONSILLAR CRYPTS.*

By JONATHAN WRIGHT, M. D.,

NEW YORK.

The inability to comprehend why the dust particles pass through tonsillar epithelium, while the same sized particles of protoplasm in the form of bacteria in the tonsillar crypts and on the tonsillar surfaces do not ordinarily penetrate the surface, had for many years left me in doubt as to the accuracy of numerous observations in the study of the histology and bacteriology of the faucial tonsil. The technique of bacterial stains in tissue is so unreliable, the blurring of the histological structure is so confusing when the bacteria are plainly discerned, that uncertainty as to their mutual relationship is easily engendered and with difficulty dispelled in the mind of the critical and skeptical observer, who distrusts conclusions drawn from experimental observation when applied to actual processes going on in the usual environment of cell and bacterium.

Recent publications of observations on the behavior of the animal cell in the presence of an endotoxine as distinguished from a toxine led me to the conception of how this differential behavior of the epithelial cell in the tonsillar crypt toward bacterium and dust might be explained.¹ The interest thus aroused has stimulated me to renewed study of the phenomenon. Neither in my previous work nor in more recent observations have I been able to convince myself that ordinarily, in the quiescent tonsil, is there any proof that the bacterial particles obey the same law of absorption as do the inorganic dust particles.

The experimental work of Pirera², frequently quoted in support of the idea that bacteria readily penetrate the epithelial walls of the tonsillar crypts was so crude, so glaringly open to criticism of technique, that his results and conclusions are utterly worthless, but there is good presumptive clinical evidence that pathogenic bacteria, which, in a state of equilibrium, are harmless habitants of the tonsillar crypts, are under certain conditions absorbed through the tonsillar epithelium. There is fair experimental evidence that pathogenic bacteria of foreign origin in vast numbers and unmodified by the cellular environment of the tonsillar crypt when blown into the throat of an animal unaccustomed to them, pass through the tonsillar epithelium and produce systemic effects. In the first instance, we must suppose some antecedent change, some nerve shock, some systemic cause, which permits the pyogenic or other bacteria, habitual denizens of the crypt, to penetrate the epithelium.

In the second instance, the experimental evidence—where there is presumably no systemic change or shock or other cause, we must suppose that the foreign pathogenic bacteria, in numbers which do not obtain under the usual conditions, overpower the

bacteriolytic or other protective influence, which is sufficient to repel under usual conditions of health the habitual inhabitants of the tonsillar crypt. This latter experimental phenomenon, of course, possesses interest in the study of the practical problem, but in itself is by no means the practical problem. That is not the way either man or beast acquires his diseases.

The shock of a bone fracture, the nerve collapse accompanying a profuse hæmorrhage, even the small shock of a nasal operation, the irritation of uric acid, the shock of cold to the surface, may supply that nerve stimulus necessary to open the portals to an infection of osteomyelitis, profound sepsis, lacunar amygdalitis, perhaps rheumatism, or a cold in the head, but man or beast does not practically acquire these affections or their like by having a laboratory practitioner blow in his throat a pure streptococcus culture. He cannot artificially produce that concatenation of circumstances which forms the practical ætiology of nature. The phenomena following such an experiment may be said to be chiefly of academic, or rather of laboratory interest.

My purpose in publishing a résumé of my observations is to draw attention to conditions which obtain under that state of equilibrium which formed the subject matter of my former paper. It seems to me our chief interest, our practical aid, is to know what happens under conditions of environment to which the animal organism is called upon to react, not what happens under conditions that practically never occur.

It is evident that the more complicated of animal organisms, the metazoa generally, meet a different environment at different spots of their periphery. In response to this demand, governed by special stimuli, the special sense organs were evolved from the ectoderm. How can we doubt that the like is true of the defensive attributes of the animal, involving, as they do, the necessary conditions of its survival? It is a law of protoplasm which holds true not only of multicellular organisms, but of the unicellular. We have support for the idea not only in the general principles of biology, but in observations made on the protozoa.

"In the sarcodina the entire cell is equally irritable; but higher in the scale, the outer plasm becomes more and more sensitive in relation to the entire body, until, in the membranes of infusoria, a generally sensitive skin is found." (Calkins: *Protozoa*.) It is therefore evident that experimental observation uncontrolled by considerations of special environments, of special localities, and made under abnormal conditions, frequently serve to lead us astray.

With this explanation it is not necessary to refer to a large mass of very painstaking and doubtless very conscientious experiments of this kind which have been published in the last ten years, and with which I am more or less familiar. I am chiefly concerned with the doubt as to the accuracy of my own observations, not on account of the experimental evidence which would seem to imply such inaccuracy, but on account of the inherent difficulties of the observations.

* From the Laboratory of the Manhattan Eye, Ear, and Throat Hospital.

¹ The Equilibrium Between Infection and Immunity as Illustrated in the Tonsillar Crypt. *Medical News*, March 4, 1905.

² Pirera: *Archiv. Ital. di laringologia*, April, 1900.

Owing to the difficulty of technique in the differential staining of bacteria, especially of small, isolated cocci in lymphoid tissue, negative observation is of little value; of no value when bacteria are not demonstrated on the surface. Even when they are clearly differentiated on the surface, and not seen beneath, as is usually the case, there would be doubt of their nonexistence beneath were it not for an occasional positive demonstration, when the circumstances are also exceptional.

The researches of Goodale and of others, so far as experimental evidence can go, proved that inorganic particles do pass the tonsillar epithelium. Dr. Goodale at least did not assume from this that bacteria also pass in conditions of health, but that was the assumption of many unacquainted with the microscopical evidence.

One must also be on one's guard in reasoning from results obtained by blowing or injecting large quantities of dust on the tonsillar surfaces. That is also an unusual, though not so unusual a circumstance as the artificial bacterial experiments present. The epithelial mechanism is suddenly called upon to do an amount of work to which it has not adjusted itself, although constantly it is dealing with smaller amounts of dust entangled in the nasal mucus, which drips down the pharyngeal gutters. As with the bacteria, it is this we are interested in tracing.

It is very difficult indeed to detect the amount of dust passing. Large aggregates, as in the experimental work, of brilliantly colored granules are easily detected, with or without stain of the tissue in which they lie. Unstained sections, in large numbers, from many individuals of different ages, living under different environment as to dust, must be examined. We can hope to recognize dust particles, only which are of such a size and shape and situation as to rule out chromatin granules. With all the care in technique possible to avoid dust in the preparation, one can never be sure that one has excluded every possibility of dust particles deposited on or in the tissue after removal from the throat. Nevertheless, by sufficient time and experience in such work, by comparing the sections, prepared with the same technique, of internal organs, such as the spinal cord for instance, supported, as I am, by experimental work with carmine or other colored dust, I have convinced myself that dust does under ordinary conditions pass readily through, at least, the interstices of the surface epithelium, as shown in the accompanying colored plate.

The registration of my conviction in the matter will obviate the necessity of the detailed publication of a mass of notes which usually deters any one from reading what the author has to say of interest.

Studies of similar phenomena in the intestine have been published, but that is a surface lined with columnar epithelium, a surface whose vital function is that of absorption. Inorganic particles at least must have passed over a long extent of surface, or must have been placed directly on the intestinal surface under abnormal conditions. Indeed, the experimental work there is subject to the same criticism of the inability to counterfeit natural conditions, as I have pointed out for the tonsils, and

which is more or less inherent in all experimental work. For the first of these considerations, if not for the last, observations on the intestinal mucosa are of little value in drawing conclusions as to the behavior of the squamous cells of the tonsillar surfaces. Here is a surface not primarily for food absorption, but at the angle where the food and airways meet it may well have evolved laws of protective reaction to its environment not elsewhere operative. This may also apply to the organic protoplasm of bacteria or to the inorganic material which for our purpose we may designate collectively as dust. In the previous paper³ I have attempted to point out that recent work on immunity to some extent offers an explanation for the difference in the reaction of the tonsil to dust and to bacteria. That the explanation, to my mind, is still far from complete I also hinted. In addition to the explanation afforded by the action of the endotoxine in exciting in the cells of the body or in the serum a bacteriolysin and not an anti-toxine, there is some work on chemotaxis which may have a significance in the problem which confronts us. It is known that chemotaxis is an activity excited in the leucocytes by the presence or the proximity of bacteria and other stimuli. All observers have noted that leucocytes sometimes absorb or act as phagocytes towards bacteria. They are attracted to them, or perhaps there is a mutual attraction, which may be called positive chemotaxis. But sometimes they do not absorb or approach pathogenic bacteria, there being apparently mutual repulsion. Bordet interprets this phenomenon as suggestive of the existence of both a positive and a negative chemotaxis.

As ontogeny repeats phylogeny, chemotaxis but repeats the phenomena of molecular attraction and repulsion. Some phases of cell division, the action of the centrosome spindles, and, indeed, the chromosomes of the nuclei suggest the "arrangement of iron filings in the field of a horseshoe magnet" (Wilson: *The Cell*), and we may conjecture that between the protoplasm of the epithelial cell and that of the bacterium there is some such play of molecular forces.

I do not know if the same interpretation can be put on it, but something suggestive of this may be seen in a mixture of various bacterial cultures with fresh water algæ in a hanging drop. The gyrations of the monocellular organisms around one another is suggestive of such action, and the forces exhibited there also remind one of the actions of various objects affected by static electricity. Others have interpreted the differentiation in the behavior of the leucocytes to different degrees of positive chemotaxis. I am entirely unable to enter into such a discussion, but Bordet's idea of a negative chemotaxis might be fruitfully considered in a study of the behavior of bacteria in a tonsillar crypt. Who knows what the future is to reveal to us of the mysteries of the molecular forces of protoplasm? Some such conjecture may well be made in the light—or perhaps we had better say the obscurity—which has recently been thrown over our

³ To those readers who have been kind enough to follow me thus far it may be well to say that my former paper, I hope, will have served to clear up what may be obscure in my argument here.

conceptions of the fundamental laws of matter, both organic and inorganic.

If it is a fact, as asserted, that the higher the virulence of the microbe the more apt is the negative chemotaxis to be observed, it would have great significance if we could suppose such a principle applicable in the relationship of the epithelial lining of the tonsillar crypt to its bacterial contents.⁴ It is said that Mesnil, whose work has been confirmed by Fahr, has observed the effect of this negative chemotaxis in the "Mastzellen." These are nowhere more abundant than in the proliferating external epithelium, and are frequently seen in that of the tonsil. I have hinted that the bacteria of the tonsillar crypt, instead of being annihilated, as they pass through, by a bacteriolysin, may, in a condition of local equilibrium, be halted by some sensitive mechanical arrangement which closes the stomata or interstices of cells. This may be modified by the supposition of a negative chemotaxis. Dissolution of the bacteria as they enter the epithelial hedge, or as they lie in the tonsillar crypt, is not in full accord, it seems to me, with observation. There is no evidence of partially destroyed bacterial protoplasm in the epithelial layers, however enormous the numbers of bacteria externally may be. Whether, however, we are to suppose it a bacteriolysin or a "negative" chemotaxis, it has not yet been satisfactorily proved that either of these are ever properties of flat epithelial cells, and we must wait for that.

Many students of histology believe there is some genetic relationship between the basal layers of epithelium and the subjacent leucocytes, especially the lymphocytes. It has been contended in the past that the epithelium springs from these elements. Others have more recently declared the change is the other way. How much embryological support all this may have I do not know, but even if we are not to assume the position, towards which histologists are advancing, that morphologically all cell types are interchangeable, there is stronger evidence of their power of vicarious function.

In this connection reference may be made to a recent communication of Wasserman and Cibron⁵, who declare that under certain circumstances every cell which is in a condition to retain ("binden") infectious material, can also produce antibodies against that material. In other words, protoplasm has an answer in kind for every stimulus. "From this follows that tissue which comes in contact with infectious material reacts locally in an 'immunizing' sense." Perhaps the authors may not have had it in mind, but this would apply fully as well to the phenomena of chemotaxis as to the production of a bacteriolysin.

Encouraged by these attempts in biological work to explain a phenomenon exhibited in many of the tissue elements of the body, I have lately verified some previous observations of many years' standing and in several ways have amplified and diversified them.

In several cases, the patient, having an enlarged tonsils on each side, was subjected to the curettement of the crypts of one tonsil, leaving the other untouched. Sufficient force was used only to insure the removal of at least some of the epithelium. At

the end of two days to one week, both tonsils were removed by the guillotine at one sitting. Hardened, blocked, cut, and stained in various ways, it was noticed that both the amount of dust and the number of bacteria were very largely increased within the crypts of the previously curetted tonsil, and, to some extent, in those of the other side there were more bacteria and dust than usual. The histological evidences of inflammation were very marked in the one and present in the other tonsil. Many large round cells (lymphocytes?) were seen along the injured surfaces. The dust seemed passing in increased amounts, but bacteria, even at surfaces denuded of epithelium, had penetrated only a very small distance. In one or two cases, long, deep incisions were made through the substance of the tonsil. Subsequently amputated, in one of them small cocci colonies were seen growing at the edge of the cut surface. This was also observed once in the more numerous scraped tonsils. In one case small bacilli colonies were seen growing on the cut surface. These evidences of proliferation, however, were very small in extent and very infrequent in occurrence. In the scraped tonsils many red blood cells had been effused and still existed in the tonsillar crypts. Often, in such a blood clot, many bacteria would be growing, in marked contrast to the adjacent tissue, also suffused with blood cells. In studying the stroma of inflamed tonsils I have been so struck with the swollen condition of the endothelium of the lymph channels. I have questioned whether bacteria within or without the phagocytes could travel along the channels of the tissues with anything like the facility they might in the quiescent tonsil. This is only one of many indications that the problem of resistance is not entirely a chemico-biological one, but is to a large extent a mechanical one. In the crypts of these inflamed tonsils, or on the surface, there is frequently a marked effusion of leucocytes, or perhaps lymphocytes. Among these, as I have noted in regard to the erythrocytes, bacteria were often plentifully growing, both cocci and bacilli. This effusion was in no sense a false membrane, as there was no coagulated fibrin with it. If, then, the erythrocytes or the leucocytes have a bacteriolytic or other inimical influence upon bacterial life within the tissues, they lose it as they pass through the epithelium.

In several cases one of a pair of tonsils was pierced by a sterile stylet of small calibre in several directions. In each of these cases, in the pierced tonsil, small colonies of bacteria were found growing around solutions of continuity at a distance from the epithelium. This would seem to indicate that deep infection of the lymphoid tissue, even with surface bacteria carried in by the stylet or slender knife, without great disturbance of tissue and without much resulting inflammation, meets with less resistance to growth than near the surface, even when the epithelium is partially removed. This is in direct accord with the idea that, at the surface, exists an adaptation requisite to meet those exigencies of habitual environment which do not exist more deeply, and that it is not so much the character of the tissue as its situation which counts in the function of resistance to infection, nor does so much depend upon the violence of the initial insult to the tissue as upon its depth.

⁴For a recent discussion of the question of chemotaxis see Fahr, *Virchow's Archiv.* cxxix, 3, 1905.

⁵*Deutsche medizinische Wochenschrift.* 13 April, No. 15, 1905.

In one or two cases tonsils were cut out only a few days after an incision made for periamygdalar abscess and before the inflammation had subsided. While diplococci and streptococci forms were found on the surface in these cases, none was found at any distance within the superficial layers of epithelium. While observations on this class of cases were too few for satisfactory conclusions, it would seem that, if we are to assume that the infection originated in the tonsillar crypts and was carried through the epithelial and lymphoid tissue to the areolar tissue around the tonsil, these tissues soon thereafter regained their normal resistance, and the epithelial channels and the lymph spaces were cleared of bacterial life. Another consideration is to be noted in this connection: If carried from the crypts the pyogenic germ did not succeed in lodging and multiplying until it reached the areolar tissue. Now, as a matter of fact, we have no proof whatever, only a mere assumption on account of proximity, that the pyogenic germs *did* enter through the tonsillar epithelium. Abscess within the tonsil as a primary focus of infection is very rare indeed, if we rule out those cases which are due to a fluidification of the contents of a plugged tonsillar crypt, yet it does occur and without the systemic disturbance of either quinsy or lacunar amygdalitis.

Without referring to the work of others, my familiarity with such reports being chiefly derived from French sources, I may again cite my own notes of earlier observations. I had the opportunity of examining, with the Gram stain, the tonsils of two or three children, who had, without marked symptoms, numerous tiny white spots on their tonsils. Although, at the clinical observation, it was supposed that these were plugged crypts, the tonsils were removed and stained sections revealed not only the larger colonies which formed the white abscesses visible to the naked eye, but cocci colonies of microscopic size which had not yet resulted in necrosis of tissue could be seen throughout the sections. Closer examination also showed free cocci in lymph spaces in the neighborhood of these colonies. I refrain from asserting that I observed them in the phagocytes, for, in tonsil sections, I must confess my inability to be sure I can distinguish small cocci from the fragments of chromatin within the leucocytes, which are so prominent in inflammatory states. Now something had happened, locally or systemically, in these children different from what happens in periamygdalar abscess, and varying from conditions which obtain during health, which had suspended both the chemical and the mechanical reaction of the tonsillar tissues. The generic variety of the bacteria in these cases I do not know. Evidently they were pus producing cocci, but I am not blind to the possibility that it was the infecting agent that was different. Let us reflect that tubercle bacilli, if they pass through the tonsils to infect deeper lymph glands, must generally do so without causing any reaction in the tonsillar tissues, yet we have some evidence—not very reliable, I am bound to say—that the tonsillar lesion is occasionally a primary one. I may remark in passing that I believe, at present, the technique of identifying the tubercle bacillus in tissue is entirely too uncertain to permit us to draw any reliable conclusions from the microscopic study of that form of infection in the tonsil.

In several cases of keratosis of the tonsils, which is to be regarded as a degenerative epithelial hyperplasia, with an obliteration of the cells and a fusing of their protoplasm so as to form so called hyaline layers at the surface, it was observed that there was abundant bacterial, sometimes mycelial, growth along this edge of the sections, especially in the crypts. To some extent this growth is within the hyaline layers, and I believe it may always be seen to have penetrated further into such material than into the normal, or, rather, into the live epithelium which had not lost its nuclei. Yet this superficial keratotic material looks as though it would present greater mechanical resistance to the penetration of bacteria than the healthy epithelium—"stickle cells," with apparently large intercellular channels. In these keratotic layers, when separated from the underlying cells, bacteria freely grow. Evidently, then, if we are to think of mechanical resistance, it is a live mechanism and not inert material which furnishes the protection.

Thus we see something of the same principle applies to blood cells, red and white, and to epithelium when they are cast beyond the cortex of the organism in the tonsillar crypts. At any rate, we receive a hint that drawing off blood serum with a syringe from blood or from serous surfaces or from a blister is not an entirely satisfactory way of studying real processes *at the periphery* of the organism. How devoid of error the results may be, when we draw conclusions as to real processes *within* the organism it seems to me is also a matter of doubt.

I now turn to some notes made upon the behavior of carmin granules where dusted on the surface, or injected into the crypts of the tonsils, in imitation of the work of Goodale and others.

The carmin powder does not pass regularly through the epithelium. It is seen passing freely only in limited areas. In other spots only a few granules are seen in the intercellular spaces. Once inside the epithelial hedge, the tendency seems to be to collect in large aggregates, making a red mass frequently visible to the naked eye. In these cases it sometimes has the appearance of the driftwood against the floodgates of a swollen stream. Isolated granules may be seen all through the tonsillar structure, not by any means always within round cells, but usually lying free in the lymph channels or intercellular spaces. All this is best studied in unstained sections, both thin and thick. There is a striking differentiation in the behavior of carmin granules as distinguished from that of the bacteria, both on the surface and in the crypts. The short time elapsing between the dusting on of the carmin and the extirpation of the tonsil, sometimes only *ten minutes*, or the technique of preparation for the microscope has sufficed to wash, not only from the surface but from the crannies of the crypts, nearly all that which has not at once penetrated. On the other hand, though the bacteria can usually be demonstrated in these same tonsillar crypts and along the surface, they have not passed within, though they may have been there indefinitely. Evidently the viscosity of the bacterium is one of its defensive and offensive properties of a biomechanical kind, as distinguished from its biochemical products, the toxine and the endotoxine. Evidently, also, this is the mechanism which combats those auxiliary forces

of dripping secretions, of pharyngeal peristalsis, of waving cilia, of deglutination, of syphonage, by means of which the inorganic particles are effectually, and the organic particles of bacteria are ineffectually, kept on the move. Thus we see the tendency to a balancing, an equilibrium of the mechanical forces habitual to the environment, just as, in my previous paper, I drew attention to the evidences of a biochemical equilibrium. A mechanical force, a stab, may upset the equilibrium by carrying the enemy deep beneath the surface, just as a freshly virulent germ from without, or a nervous shock from within, may upset the equilibrium.

The evidence of the viscosity of the bacteria and of the persistence with which they cling to the living surface is seen in appearances to which I have already referred, in which the scaling off of keratotic material and the effusion of round cells through the epithelium has failed to dislodge them. They have penetrated the hyaline layers and have not been carried away by the effused cells or serum. Not so with the dust. I have just referred to the readiness with which it is washed from the surface. I have succeeded in staining sections of tonsils, dusted *intra vitam* with carmin, so that in the same microscopical field were shown a deposit of carmin granules which have left a track behind them of stray granules from the surface, through which they have passed to their lodgement against some temporary obstruction to the stream. On this surface, at the very point where they entered, could be seen abundant bacterial life, really more separate bacteria on the surface than granules beneath. On the other hand, there was only a granule or two of carmin left on the surface, and no bacterium beneath.

Of these appearances I have had a colored drawing made, which needs no further elucidation except to say that the tonsil from which the section was selected for illustration was dusted with carmin fifteen minutes before removal. We must conclude that the carmin granules passed through the layer of viscous bacteria and then through the epithelium without carrying any of the bacteria with them. Beyond the tentative suggestions I have advanced, I know that I have done nothing conclusively to explain this phenomenon. That awaits a more careful study by others. I can hope only to point out the unsatisfying nature of facts elicited by experimental studies thus far reported. The analogy between artificial laboratory processes and those real ones of the tonsillar crypt is not close enough to bear analysis. The power of figurative language, aided or not by fantastic diagrams, falters in the attempt to shadow forth the complexity of the interrelation of forces in the cause and cure of disease. With the advance of knowledge all we accomplish in the end, it seems, is the relegation of causes to processes in our apprehension of phenomena. That is the old story.

44 WEST FORTY-NINTH STREET.

Fluid Gelatin in the Treatment of Diarrhœa in Adults and Children.—E. Cohn, of Berlin, prepares gelatin by sterilizing it for six hours, when a ten per cent. solution will not coagulate. Of this he uses 80 grammes with 1 gramme of citric acid and 19 grammes of syr. aurantii, a dessert-spoonful to be given every two hours.

CHRONIC ENDOTRACHELITIS; A NEW METHOD OF TREATMENT WITH NEW INSTRUMENTS.*

By DANIEL H. CRAIG, M. D.,

BOSTON,

SURGEON TO GYN. PATIENTS, LIFE HOSPITAL FOR WOMEN; INSTRUCTOR IN GYNÆCOLOGY, BOSTON POLYCLINIC, ETC.

In exploiting, at this late day, a new method of treatment for a condition which has been the subject of debate ever since, to say the least, the birth of gynæcology as a specialty, it is as well to begin by establishing in our minds by argument what has been established in my mind by experience, namely, the advisability of instituting an independent treatment of chronic endotrachelitis as an entity.

There has been the greatest diversity of opinion expressed by all modern writers upon gynæcology as to the independent existence of endotrachelitis, acute or chronic. Permit me, in the interest of time saving, to waive the discussion of the acute forms of endotrachelitis and to speak only of the chronic forms. There are four ways of determining whether or not chronic endotrachelitis may exist independently of associated corporeal endometritis. These are by post mortem findings, by postoperative hysterectomy findings, by submission of sections from both cervix and body to microscopical investigation and the proof of its independent existence by the clinical test of treatment. Many pathologists have thoroughly exploited the post mortem findings with a very general consensus of opinion in favor of its independent existence. Pozzi has thoroughly and convincingly shown by postoperative hysterectomy findings that chronic endotrachelitis may exist without associated corporeal endometritis. In this instance it is the more noteworthy inasmuch as Pozzi started out to prove the reverse. Of the two remaining ways the first and eminently scientific manner would be the submission of excised portions of both cervical and corporeal endometrium from the same case to microscopical interrogation. This method lacks, however, in practical safety what it so eminently possesses in scientific value. Firstly, because a healthy fragment might be examined from an endometrium partially, or even largely, inflamed. Secondly, and by all means most importantly, the employment of this means necessitates the traversing of a cervix known to be diseased with a strong presumption in favor of an organic infectious ætiology in order to reach an endometrium not known to be as yet involved. This cannot be done without imminent danger of infection of healthy tissues, should the endometrium be found healthy. Therefore if any safer method practically satisfactory exists we are in duty bound to employ it. And I am convinced that such a safe way exists in the fourth way above mentioned, namely, by the clinical test of cure of all symptoms by competent treatment directed to the cervical canal only. Many cases throughout a considerable experience amply

* Read before the Southern Surgical and Gynæcological Association, in Louisville, December 11, 1905.

prove the value of this method. To be explicit, I have many times been able to entirely remove all symptoms and signs of the original disease in cases in which, from definite indications, a positive diagnosis of uncomplicated endotrachelitis existed. This constitutes conclusive proof that for all practical purposes the disease was uncomplicated chronic endotrachelitis, and leads me to state conclusively that chronic endotrachelitis does exist without concomitant corporeal endometritis. Furthermore, that the cases in which it so exists are relatively easy of determination.

With this preface permit to me consider the subject in orderly detail.

Ætiology.—The causes of chronic endotrachelitis are often dismissed with a word, and are on the other hand sometimes considerably elaborated. Pryor (1) said that all cases of endotrachelitis were due to lacerations of the cervix or to gonorrhœa. This I consider too arbitrary and dogmatic. Dudley (2) specifies five causes: 1. Extension of infection from the vulva, vagina, or endometrium, especially infection of gonorrhœal origin. 2. Puerperal laceration of the cervix. 3. Excessive coitus. 4. Foreign bodies, tumors, polypi. 5. Infection from unclean instruments and fingers. This enumeration appeals to me. For brevity perhaps Mundé's statement takes precedence. He summarizes the causes as "Everything which produces chronic pelvic congestion."

While, as with the ætiology, I have nothing new to add I wish to bring out a few points in the *anatomy* of the cervix and while there are slight variations of opinion, the description of the cervical mucosa by Quain (3) seems the best, and is as follows:

"The mucous membrane of the cervix is much firmer and more fibrous than that of the body. Between the rugæ of the arbor vitæ there are numerous saccular and tubular glands. In the lower part of the cervix the mucous membrane is beset with vascular papillæ and the epithelium is stratified, but in the upper half or more the epithelium is columnar and ciliated like that of the body. The glands, *which are short* (italics are mine.—Author), with a large lumen, are everywhere lined with columnar ciliated epithelium, even where the epithelium of the surface is stratified. Besides the follicular glands there are almost constantly to be seen the so called ovula Nabothi, clear yellowish vesicles of variable size, but visible to the naked eye, embedded in the mucous membrane. These probably arise from closed and distended follicles; but their nature is still doubtful." Waldeyer (4) also particularly calls attention to the greater thickness of the cervical mucosa. This anatomical structure, while greatly perverted by the time a case of chronic endotrachelitis presents itself for treatment, still remains important in two particulars, namely, the thickness of the mucosa and the shortness of the glands making these glands, even after long periods of disease, little likely to penetrate the deeper underlying muscular tunics of the cervix as happens regularly in the corpus uteri. Aside from the above histological character of the mucous membrane I wish only to

direct your attention to the so little appreciated internal os. This is variously estimated by gynecologists and anatomists between wide extremes. Some speak of it as a fold of the mucous membrane, while at the other extreme stand those who ascribe a definite musculature to this region. Its calibre is stated equally variously between the diameter stated positively by Deaver (5) as 3 mm. and a slight constriction between the two cavities. The widest diameter positively ascribed to it is 3 to 5 mm. The length of the cervical canal, between the external and internal ora, is 2.5 cm. in the cervix which has not been foreshortened by laceration and consequent eversion of the lips.

The *pathology* of chronic endotrachelitis has been so well understood and so often described that a careful study of many cases has failed to enable me to add to our knowledge, and I shall therefore content myself with merely calling your attention to the pathological foundation upon which my treatment has been based.

In chronic endotrachelitis the inflammation is never superficial. The microscopical examination of segments of the inflamed tissue removed with the sharp curette invariably shows the disease to have affected, to a greater or less degree, practically all the component elements of the mucous membrane. Many glands are distended with secretion and cellular debris, the columnar epithelium being flattened and many layers thick. In some the orifice is completely occluded, in others plugged by the exfoliated epithelium from the gland walls and in a few still patulous. The glands are so distended that pressure atrophy of the surrounding connective tissue elements is marked and there is more or less, but never extreme round cell infiltration. Except in unusually old and severe cases the muscular tunics are not penetrated by the diseased glands. But sometimes this does occur, the muscle fibres atrophying before the onpressing, distended gland until it actually presents under the mucous membrane of the portio vaginalis, where it becomes manifest as a retention cyst.

Symptomatology should need no special attention here. The symptoms are as variable as the other factors, but the only two which have attracted my attention by their accentuation, by their annoyance of the patient and by their very sudden and satisfactory disappearance under treatment have been the leucorrhœa, of course, and a very sharp, obstinate, sharply and persistently localized backache. These are by no means the only symptoms, but are the most noteworthy on account of regularity of appearance through a long series of cases.

The *diagnosis* affords me an opportunity to say something for myself, but before doing so I wish to justify my position by a quotation from, so far as I am able to learn, the very latest authoritative work on gynecology. In this connection Ashton (6) says: "The differential diagnosis depends upon determining the source of the discharge. This is rarely possible, as endometritis is usually associated with endotrachelitis; and besides it is of no practical value to distinguish between the two conditions, as the treatment is

the same for both." From the first part of this quotation I should take but one exception: I should say that endotrachelitis was *often* instead of *usually* associated with corporeal endometritis. From the concluding portion I dissent entirely. My experience leads me to believe that a very simple sign differentiates the two conditions absolutely.

In the foregoing I referred to the variety of description of the internal os. I agree emphatically with those who ascribe a certain definite musculature to this region, and believe that the internal os is capable of undergoing considerable variations of calibre in the unimpregnated state of the uterus. It is upon this variability of calibre that I have based my diagnosis.

Nature everywhere throws all possible barriers before the advance of inflammation and infection, two perfect examples of which are the line of demarcation in gangrene and the peritoneal adhesions about intraabdominal infections. In chronic endotrachelitis we see no exception. The internal os constitutes not a passive but an active barrier to the passage of infection from the cervical into the corporeal cavity. This fact you can easily demonstrate in every case by simply introducing an ordinary Simpson or Sims uterine sound up to the internal os. Should your inflammation prove to be localized exclusively within the cervical canal the bulbous tip of the sound will pass the firmly contracted internal os only upon the expenditure of considerable force, even though there be no angle nor flexion between the two cavities. This barrier represents far more resistance than any turgid, cedematous, or even hypertrophied mucous membranous fold could possibly cause. Moreover many cases have demonstrated conclusively that an internal os which is thus resistant before treatment becomes patulous in a manner and with a speed entirely incompatible with hypertrophy.

On the other hand, in every case in which a chronic endotrachelitis and corporeal endometritis coexist, nature, with equal care, provides against back pressure of infectious material into the Fallopian tubes and thence to the peritonæum by widely relaxing the internal os so that in this class of cases with the same sound it is nearly if not quite impossible to accurately determine the site of the internal os so widely is it open. In the interests of free drainage its musculature is relaxed to the utmost.

The diagnostic relevancy of the foregoing seems to me apparent. Given a contracted internal os, the inflammation lies below it; given a relaxed internal os, the inflammation is above as well as below it. Our treatment, at least by the method which I shall outline below, must be confined to those cases in which beyond a doubt the internal os is closed so tightly as to offer unmistakable resistance to the entrance of the uterine sound. In many cases even a small probe can only be passed with the use of considerable force.

Incidentally it is interesting to note that this function of the internal os is tacitly, I do not know whether intentionally or not, admitted by most authors. A single quotation not radically

different from what we find in most textbooks will serve to illustrate this point. Dudley (2), in his last edition, on page 213, says: "Although the normal endometrium is free from pathogenic bacteria, the cervical cavity is quite accessible to them." This analyzed means that some impassable means of resistance to infection is interposed between the cervical and corporeal cavities. This barrier we do not believe to exist in the corporeal secretion because this secretion does not sterilize the once infected endometrium. For the same reason the resistance cannot be assumed to have its origin in the corporeal circulation. It cannot be in the ciliary activity because a similar, equally efficient ciliary activity exerting its force in the same direction, toward the external os, exists in the cervix. By this process of exclusion what remains which so satisfactorily explains this immunity of the endometrium, especially in view of the foregoing, as the acceptance of the active mechanical barrier provided by the muscularly contracted internal os?

At this point I wish to digress to submit the suggestion that in cases of sterility in which no cause other than chronic endotrachelitis can be found and in which the sterility has been attributed to the plug of tenacious mucus within the cervical canal in my opinion the contracted internal os offers a more formidable barrier to the entrance of spermatozooids than the mucus does.

The *prognosis* of chronic endotrachelitis has never been anything but good as regards the life of the patient and has never been anything but bad as to recovery except by radical operation. I refer to operations of such magnitude as to necessitate the use of a general anæsthetic and requiring a more or less protracted confinement to the bed with the consequent loss of time and, of course, in wage earners, money. Every textbook for generations has given a bad prognosis as to cure by palliative and caustic remedies and has still offered no substitute except the before mentioned operations. At the end of three years' work with my present method I feel no hesitation in promising a speedy cure without the loss of any time, without confinement to bed, and without anæsthesia, except that occasionally, in those known to be excessively nervous or hypersensitive, a few crystals of cocaine are used at the external os. With the cervix practically all acute sensibility is as closely confined to the external os as is the case of the urethra and the external meatus.

To come now to the *treatment*. First let me describe the salient points of the instruments which I have devised with which to treat these cases. The length of the three instruments is equal, and is 22 cm. This length was chosen as the shortest which would enable the gynecologist to satisfactorily accomplish the treatment without allowing his hands to come in contact with the patient. This seemed to me important because this method being designed for use at the office or out patient clinic the thorough sterilization of the hands consumed too much time. With this length of instrument ordinary manual skill and dexterity render such sterilization entirely unnecessary.

The cervical forceps was designed to grasp the anterior aspect of the portio vaginalis as near as possible to, but not into, the external os. The tissues are here very often so soft as to tear when so grasped by the ordinary tenaculum or tenaculum forceps under the strain to which this grasp is to be subjected. The ordinary grasp with one blade within and the other without the cervical canal will later be seen to be obviously impossible in the use of either the dilator or the curette. The two pairs of opposed teeth give a grip which has never lacerated. The curve on the flat facilitates the combined use of the forceps and dilator with one hand.



FIG. 1.—Forceps.

The external os dilator was suggested by the conical calibrator used in dilating the external urinary meatus preparatory to cystoscopic work. In fact, the urethral calibrator was used for this work until the past few months. Each of its dimensions is definite and has its *raison d'être*. It is of rigid steel throughout. The diameter of its tip is 2 mm., which is as small as it could be made without actually giving an angular point. The length of the cone from tip to shoulder is 2 cm. This length was chosen because it being 0.5 cm. less than the ordinary depth of the cervical canal it would even permit of some eversion, due to laceration, without the tip of the cone impinging upon or going through the contracted internal os. A cervix in which there is more than 0.5 cm. shortening, owing to laceration and eversion, is so patulous as not to require the use of any dilator. The narrow parallel surface just before the shoulder facilitates the retention of the dilator within the external os long enough to produce sufficient relaxation without maintaining so forcible a degree of pressure as to be constantly disagreeable to the patient. This need was very manifest in the use of the conical calibrator. The shoulder is, of course, self explanatory. The flattened base of the handle facilitates the maintenance of a steady unirritating pressure. The perimetres of the shoulders are made hexagonal to prevent rolling and so coming in contact with unsterilized material.



FIG. 2.—Dilator.

The only features about the curette which need attention are the shape and width of its cutting blade. It is sharp, the edge being obtained by bevelling from above downward and inward, making the blade cut as the curette is withdrawn. The blade and its fenestrum are triangular, presenting a base of 6 mm. and relatively sharp angles. The base is just twice the diameter of the normal internal os as stated by Deaver. This excess width serves to render it impossible to

introduce the curette past the internal os, unless it be dilated, which in itself constitutes a contra-indication to the use of this curette, without the employment of sufficient force to lacerate the tissues. The sharp angles serve, upon the rotation of the curette, to remove the pathological tissues too near to the internal os to be readily reached in the ordinary traction of the curette, and are especially useful in those cases in which a sharp angle exists just below the internal os due to pressure atrophy with excavation or internal laceration of the cervix. Three furrows on the appropriate surface of the hexagonal handle indicate the direction of the cutting blade. The curette is of rigid steel throughout, no necessity for flexibility having been encountered.



FIG. 3.—Curette.

I wish to preface a description of their use by a few words as to who should use them. Years ago Thomas, Sims, and others advocated the curettage of the cervix for chronic endotrachelitis and it is constantly done by many to-day, but because of the lack of proper instruments either too much or too little has been done. My first cases were curetted with a tiny ear curette and the results were far better than with chemical or caustic applications, but were still unsatisfactory because the cervical membrane was not thoroughly removed. Next, before designing my own instruments, I used a No. 3 antrum curette with, on the whole, satisfactory results, but the angular shape has rendered the curetting much easier both for myself and through the saving of time for the patient. The increase in length is a particular advantage also. But to revert to Thomas, he says: "We have adopted a plan, in every decided case of this disease, of proceeding at once to the one radical means of effecting a permanent cure." He then describes his method of crucial incision of the external os (in nulliparæ), the removal of the four triangular flaps and the sharp curettage. He further says: "It should be distinctly understood that this treatment is to be looked upon as an operation, and is to be performed only at the patient's residence or at some spot where she can be immediately placed in bed, and if necessary to quiet her nervousness or ease her pain, an anæsthetic should be given." Such a formidable procedure is entirely unnecessary, as is also either the confinement in bed or the anæsthetic.

While my method of treatment has none of the mentioned characteristics of an operation, it certainly does possess several others. It is an operation. It should not be undertaken by the average general practitioner with but little gynecological skill and with little or no practical working knowledge of the establishment and maintenance of asepsis, and is not offered for his use, but for the use of only such as are trained in gynecological and surgical manipulations. Its use must be confined to those having sufficient diagnostic acumen to ascertain the exact state of

the internal os and with sufficient familiarity with instrumental manipulation, to do no injury through too great employment of force, and yet to do the work thoroughly. Above all a rigid asepsis of the instruments, vagina, and portio vaginalis is essential. With due attention to this asepsis I have never seen, in three years of constant and frequent employment of this method, a single case of infection or even of rise of temperature. But I am convinced that a careless, clumsy, or unclean use of these instruments could produce serious if not fatal complications. With this proviso I will describe my technique.

In all my work I have used the Sims position, have operated through the ordinary medium sized Sims speculum, and have had the assistance of my office nurse. But while it would certainly be much more difficult, I see no reason why the dorsal position and bivalve speculum could not be used.

It is my rule never to operate upon these cases without from one to several days of antiseptic preparation of the vagina and portio vaginalis. Efforts at sterilization of the cervical mucosa are impracticable and have never been attempted. I have patients use three, two quart 1 to 5,000 formalin douches moderately hot in the sitting posture each day for from one to three days during which total abstinence from sexual relations is prescribed. All instruments to be used, including speculum, forceps, and everything which will in any way come in contact with the patient, are sterilized by boiling in a 1 per cent. soda solution for six minutes.

When the patient is upon the table the labia are very widely separated, using more retraction than for an ordinary examination, so that the speculum can be introduced without coming into contact with the external genitalia. I have never found it necessary to scrub or shave the vulva, but any hairs which project or fall into the lumen of the speculum so as to contaminate the instrument during use are cut away. The vagina is thoroughly scrubbed with a pledget of sterile cotton, a cotton ball saturated with a strongly alkaline solution, of which the simplest and most thoroughly efficacious is a sterile (boiled) saturated solution of sodium bicarbonate. This solution completely removes all mucous and leucorrhoeal accumulations, and is immediately followed by a scrubbing with 1 to 5,000 formalin, or any equally efficient germicidal solution.

The dilatation is now done, or if it is deemed advisable in the individual case, a few crystals of cocaine may be taken up in the tips of a pair of uterine forceps and deposited upon and just within the external os. Very few patients require cocaine, and many upon whom I have operated without it state that the pain is less than that experienced in having teeth filled. If cocaine is used from two to three minutes should be allowed for the assertion of its action.

Being now ready for the operation itself, the anterior outer aspect of the portio vaginalis is grasped with the forceps as near as possible to the external os. The grasp should be deep and firm enough to furnish good counter pressure without danger of tearing out. Care should be

taken not to have the teeth penetrate to the lumen of the canal.

The tip of the dilator is then introduced through the external os and against the counter pressure of the forceps is forced home until the shoulder is in contact with the external os. The dilator maintains its position with but trifling pressure. Care must at all times be taken to avoid unnecessary downward traction, as this puts unnecessary strain upon the uterine ligaments and favors subsequent malpositions of both uterus and appendages. Diseases of the tubes and ovaries contraindicating traction and of such a nature as to make any collateral treatment only partially successful should constitute a contraindication to this form of treatment, except as an immediate preliminary to the radical treatment of the associated lesions.

The curettement of the cervical canal must be so thorough as to completely remove the cervical mucosa giving the familiar grating sensation felt when the musculature is reached. In proper cases no particular care is needed to guard against passing the internal os. The curettement is concluded by a few rotations of the curette upon its long axis while it is gently pressed against the resistance offered by the internal os in order to remove the tissues immediately subjacent.

Finally the cervical canal now denuded is antisepticated by the application of iodized phenol to its entire surface, the vaginal vault is filled with powdered boric acid, and a 33 per cent. ichthyol and glycerin strip is laid against the os internum and about the portio vaginalis.

The description of this little operation requires more time than its performance.

The patient is permitted to leave the office at once. No aching nor pain has been observed. She is instructed to remove the dressing in from twenty to thirty hours, and to resume her daily 1 to 5,000 formalin douches for ten days, during which time she is to avoid unusual physical exertion, and to abstain from sexual relations. She is told to report at the office in from three to five days for observation. No patient has ever reported, although all have been told to do so, any complication. At the end of from five to ten days the cervix has resumed its normal appearance and all evidences of endotrachelitis having disappeared. Both the long standing swelling and the excessive secretion will have disappeared, unless of course, some of the increased size was due to actual hypertrophy, in which case its disappearance takes much longer and is seldom complete. Best of all is that the patient feels well.

In three cases three curettements at intervals of about two months were necessary to achieve a complete cure, which now eighteen months after the last treatment seems permanent. In several cases two curettements have been necessary, but these have all been cases of unusual severity and of exceptionally long standing. The cervical tissues in all of these had been more or less unusually destroyed by caustic applications.

Considering how uniformly successful curettage has proved in proper cases of corporeal endometritis in which situation the entire glands, the principal habitat of the infectious principles, can-

not, because of their dipping down into the musculature, be completely eradicated, it is to be expected that in the cervix, where the glands are shorter and can be removed, the cure should be more prompt, and certain; experience proves this view to be correct.

Finally I wish to state emphatically that this operation is not offered as a substitute for tracheloplastic operations in cases dependent upon laceration, nor as a substitute for uterine curettement in cases in which both body and cervix are involved.

Bibliography.

1. Pryor. *Gynecology*, Appleton's, 1903.
2. Dudley, E. C. *Principles and Practice of Gynecology*, Lea Brothers, 1902.
3. Quain's *Elements of Anatomy*, 10th Ed., vol. iii, Part iv, p. 265.
4. Waldeyer. *Das Becken*, p. 470.
5. Deaver. *Surgical Anatomy*, Blakiston, 1903.
6. Ashton. *Gynecology*.

386 COMMONWEALTH AVENUE.

THE VICIOUS CIRCLE AFTER GASTROENTEROSTOMY.*

By JOHN B. DEAVER, M. D.,

PHILADELPHIA.

Although systematic writers limit the term "vicious circle" to that condition after gastroenterostomy where the contents of the afferent loop of the anastomosis are passed into the stomach, and call the passage of the fluid from the efferent loop into the stomach "intestinal regurgitation," yet it has always seemed to me that such refinement in terms is superfluous, since in the immense majority of cases it is impossible to be sure which of the two conditions exists. It has therefore always been my custom to include under the classification of "circulus vitiosus" all those cases in which patients suffer from persistent vomiting after the operation of gastroenterostomy, and I am glad to see that this is the term adopted by Mr. Moynihan in his last work, *Abdominal Operations*.

Ever since the operation of gastroenterostomy was first done, without premeditation, by Wölffler in 1881, surgeons have been seeking some method by which this vicious circle could be avoided. It is needless here to describe all the technical changes which the operation has undergone in attempting to eliminate this complication. Each individual method has been adopted to overcome what the surgeon believed was the cause of the vomiting. Those who thought it was due to spur formation at the site of the gastroenterostomy wound aimed to prevent this by attaching the jejunum to the stomach for some distance both above and below the opening; those who thought it was due to contraction of the anastomotic opening, took measures to insure its patency; those who thought it produced by pyloric regurgitation obliterated the pylorus, and those who considered that it depended on discharge of the contents of the afferent loop into the stomach, or to obstruction to discharge from the afferent loop, took measures to overcome this difficulty. But the fact remained that not one sur-

geon was able to assign a satisfactory cause for the condition, however great his experience may have been with the operation or with this much dreaded sequel. The theories of Chlumski, of Steudel, and of Kelling have all been disproved in some instances, and although we are forced to the rather humiliating conclusion that we do not know what the cause is, we are at any rate convinced that it is not in every case produced by the same factor, and we are sure of a few factors which are never alone efficient causes.

We have learned empirically that the posterior anastomosis with a portion of jejunum as short as it can conveniently be made is the form of operation of all others which is least likely to be followed by pernicious vomiting of one form or another, and I think to Mr. Moynihan may justly be attributed the merit of drilling the fact into our minds. In saying this I am not unmindful that a similar operation, equally successful, has been and still is advocated by Murphy, Mayo, Hartmann, Robson, and others; but it is peculiarly to Moynihan's credit that he has demonstrated the success and the simplicity of the procedure in a manner so far unexcelled.

It is not, therefore, with the idea of bringing out anything particularly new in this department of surgery that I venture now to discuss a subject which has already been so ably dealt with by other writers, but because I have thought by relating my own experience, which has been larger with this complication than I cared to have it, and by narrating the history of some of my own patients, I might thus be enabled to call to mind some points that might be of value to other surgeons who were attempting to solve the same problems.

I. Prevention.—In common with all surgeons who did stomach surgery as long as ten years ago, my earliest gastroenterostomies were done on the anterior wall of the stomach by means of the Murphy button. It was not long, however, until I began doing the posterior operation, still employing the Murphy button. In the anterior operation a long afferent loop of jejunum is obligatory, on account of the necessity of spanning the transverse colon and great omentum; and, again in company with other surgeons, I pursued the same technique in performing the posterior operation, not appreciating at that time the drawbacks and the very positive dangers of the long afferent loop. By this method in both the anterior and posterior anastomoses, I occasionally had regurgitant vomiting develop after the operation. Believing that this was due to obstruction at the anastomotic opening, preventing the proximal (afferent) loop of jejunum from freely emptying itself into the distal (efferent) loop, I then changed my technique so as to include at every primary operation an enteroanastomosis between the afferent and efferent loops, thus making sure that obstruction to the afferent loop at the gastric anastomosis could not exist. This method (which is practically that of Lauenstein, Braun, and Jaboulay) I have employed until within the last few months. It proved for a long time a satisfactory method, although its performance consumed slightly more time than the simple gastroenterostomy alone. To make this additional time as slight as possible, I at first employed a Murphy but-

* Read by title before the Southern Surgical and Gynecological Association, December 13, 1905.

ton in making the enteroanastomosis, although I had already abandoned this device in favor of the simple suture in the gastric anastomosis.

As I say, for a long time this method proved satisfactory; but finally I met with a disaster with the Murphy button—a disaster which was due to a fault of technique in selecting too large a button and which resulted in sloughing and perforation at one margin of the enteroanastomosis. I therefore abandoned the Murphy button even for the intestinal anastomosis, and have since then employed simple suture for both this and the gastric wound.

Even while employing the method of posterior gastroenterostomy with the long loop and enteroanastomosis, I was, of course, well aware of the brilliant results of other surgeons from the operation with the short loop, but I was unwilling to abandon a technique with which I was familiar, and which was still proving itself satisfactory in my hands, for another which I had not personally tried, and which was therefore commended to me only on theoretical grounds. In the course of time, however, it came to pass that two patients on whom I had done this operation of gastroenterostomy returned to me with the vicious circle. I relieved them by secondary operations which I will presently discuss, but the mere occurrence of these two cases, small in proportion though they may be to the total number of operations I had done by this technique, proved that the technique was not faultless, and that it must be improved if I desired to avoid similar contingencies in the future. Then it was that I commenced my most recent series of operations of posterior gastroenterostomy with the short loop, rather no loop at all, and I regret that its adoption is so recent that I can draw no final conclusions as to its comparative value in my hands.

Moynihan¹ has not seen regurgitant vomiting nor the vicious circle in his last 130 operations done by this method. W. J. Mayo has obtained equally good results. The merits of the posterior operation with the shortest possible piece of jejunum are well recognized. The point on which so much depends, maintenance of previously existing anatomical conditions, is by this technique allowed its fullest application. The duodenojejunal junction normally is placed at about the same level as is the pylorus, and the jejunum descends obliquely and to the left from its origin, its upper surface lying in contact with the under surface of the transverse mesocolon. The greater curvature of the stomach thus is found several inches below the beginning of the jejunum, and by anastomosing the jejunum about four or five inches from its origin with the posterior wall of the stomach just above the greater curvature, through the transverse mesocolon, neither the stomach nor the jejunum is disturbed from its normal relations with the other, nor with the surrounding viscera. By this means also the duodenal contents, on their entrance into the jejunum, pursue their normal downward course, and by the force of gravity and peristalsis are carried past the opening in the stomach.

When a long loop is employed, the fluids in the afferent limb of the loop have to pass upward against gravity to reach the point of attachment of the jejunum to the stomach, and even if they succeed

in reaching this point, may then be discharged into the stomach instead of continuing their natural course along the jejunum.

Another valuable feature of the operation with the short afferent piece of jejunum is that there is practically no space left between the root of the mesentery and the under surface of the transverse mesocolon through which a hernia of the small intestines may occur, passing from right to left or from left to right. Several cases are on record in which this form of internal hernia occurred, when the operation had been done with a long afferent loop, and a considerable portion of the mesentery acted as a band, stretching from the posterior abdominal wall to the site of the gastroenterostomy, and predisposing to volvulus and internal hernia.

A very important part of the operation of posterior gastroenterostomy, by whatever method performed, consists in stitching the edges of the incision through the transverse mesocolon to the gastric wall, a short distance away from the anastomotic sutures. This is a step which has been proved to be necessary by the occurrence of a hernia of the small intestines through the opening in the transverse mesocolon into the lesser peritoneal cavity. Hartmann has had it occur, Moynihan has seen it, it occurred in the experience of Harte, of Philadelphia, and no doubt other instances are on record. To obviate the occurrence of this complication most surgeons have adopted the precaution of stitching the edges of the opening in the mesocolon to the stomach. Mr. Moynihan, on the contrary, advises stitching it to the jejunal loop below the anastomosis. I cannot approve of this modification of the usual technique. Mr. Moynihan does not give any reason for this preference, and to my mind no good reasons exist. By suturing the mesocolic edges to the stomach we in the first place close the opening into the lesser peritoneal cavity; this is the most important function of the procedure. But in addition to this we insure the gastric opening being the lowest portion of the stomach, as the mesocolon draws the stomach down into a funnel shaped depression, and we moreover avoid any possible constriction of either loop of the jejunum. That this last is an important feature of the operation I think cannot be denied. Probably every surgeon has seen cases where the opening in the transverse mesocolon, not having been sutured to the stomach, contracted, and, becoming quite tough and cicatricial, presented a very material obstruction to the emptying of the proximal loop of the jejunum into the distal loop. And although I know this cannot be blamed for all cases of vicious circle, it is certainly my conviction that obstruction of the afferent loop is the most usual cause of pernicious vomiting.

Having thus sketched the progress made toward the most modern—and, as I believe, the operation which is technically most correct—I desire next to discuss the various plans which I have pursued in the treatment of the vicious circle.

II. Treatment.—No surgeon is pleased to be called upon to open an abdomen to correct some fault of technique, or some theoretically avoidable error in an operation, which only becomes apparent some days, weeks, possibly months or years, after the primary laparotomy.

If a patient recovers satisfactorily after the first

¹ *Abdominal Operations*, p. 169.

operations, and remains well for a year or more, and then begins to have recurrence of the old symptoms of pyloric stenosis, such a patient is not truly suffering from the vicious circle. He or she is probably suffering from a recrudescence or a recurrence of the disease, and an operation a little more radical in its scope will probably effect a permanent cure. Such patients have often been operated on by gastroenterostomy for mild degrees of pyloric obstruction. Immediately after the operation the new gastrointestinal opening performs its function well, the ulcerated pyloric region is resting, and eventually heals. When this stage is reached it becomes easier for the stomach to empty itself by way of the pylorus, in the natural manner, than into the artificial gastrointestinal anastomosis. As a consequence of this return to former conditions the gastroenterostomy contracts as the result of disuse, and the imperfectly healed pyloric region again becomes ulcerated, and the old symptoms return. The whole series of events may be accomplished within a few weeks—eight weeks to two months—or immunity from discomfort may last a year or more. In rare instances such an operation effects a permanent cure. But the lesson which the surgeon must draw from such cases is to completely occlude the pylorus at the primary operation, and thus procure that region of the stomach constant rest, and insure the permanent patency of the gastroenterostomy wound.

There is, however, another class of patients in whom no period of absolute freedom from vomiting has been present after the primary operation, but who nevertheless do not lose weight and become emaciated. I have observed two or three such patients. After the gastroenterostomy convalescence was satisfactory, but occasionally there would be copious vomiting of bilious matter. Meals were eaten with appetite, no discomfort ensued, but three or four hours after the meal, this copious bilious vomiting would occur. The patients did not lose in weight. One patient gained forty pounds during the first year after the gastroenterostomy, but the vomiting of pancreatic and bilious fluids was so annoying and persistent that she finally submitted to another operation. The fact that these patients vomit practically no food, that digestion is accomplished without special discomfort before the vomiting occurs, and that they do not lose in weight, are all important matters to be considered. We are assured from these facts that digestion and assimilation are accomplished fairly well; but that the excess of bile and pancreatic juices in the stomach finally causes vomiting.

We know from every day experience, as well as from experiments made upon dogs, and from the operations of Terrier and others, that a moderate amount of bile or pancreatic juice in the stomach is productive of no particular discomfort, and interferes in no way with the digestion or with the health of the individual. And we know, on the other hand, from the experience of Kelling, that the duodenum becomes filled through the pylorus until its capacity is reached, and that then the movements of the stomach cease as the result of reflex nervous action, until the duodenum has discharged its contents into the jejunum. It is by this important mechanism that

digestion is accomplished, and that the bile and the pancreatic juice are enabled to act upon the chyme from time to time as it is propelled through the pylorus, and that they are not called upon to digest at any one time a disproportionately great quantity of food. Not until the duodenum is emptied, therefore, can any further chyme be discharged from the stomach. Now Kelling found that obstructions at the duodenojejunal flexure by preventing emptying of the duodenum caused arrest of gastric peristalsis until such time as absorption from the obstructed duodenum rendered it empty, and thus removed the inhibition of the stomach's peristalsis.

In searching for an explanation of the mechanism present in the class of patients just described, I do not think we need to look further. The form of operation primarily employed was posterior gastroenterostomy with a long loop. It was probably the length of the loop that preserved the patient's life. There was formed an obstruction to the intestinal canal at the site of the gastroenterostomy. The duodenum and afferent loop became filled with food and bile and pancreatic juice. Some food no doubt passed into the efferent loop; but the important point for us just now is that the proximal (afferent) loop, together with the duodenum, became filled, either by antiperistalsis through the gastroenterostomy wound, or through the pylorus. When this proximal loop became filled, stomach action ceased; hence there was no vomiting soon after eating; and as the proximal loop was long, it held a fair quantity of food; this food was digested in and absorbed from the proximal loop; though no doubt some food was received from the stomach into the distal loop and was digested in and absorbed from it. The longer the proximal loop, the more would it hold, and the better would digestion be accomplished. When the proximal loop was finally emptied by absorption, stomach movements returned, and the surplus of bilious and pancreatic matters which had entered it from the duodenum, as well as the residue of food, if any remained, were rejected by vomiting.

To relieve such a condition, the primary object must be to prevent overfilling of the proximal loop with food. The mere presence of bile in the stomach would not produce the vicious circle—it would be more or less perfectly neutralized by the acid juices of the stomach and would be promptly discharged again from the stomach into the distal loop if that was the easiest course for it to pursue. Therefore, it is my opinion that in occluding the pylorus to remedy the vicious circle, we do it not so much to keep bile out of the stomach, as to keep stomach contents out of the duodenum and the proximal loop. If we make it easier for the stomach contents to escape directly into the distal loop of the gastrointestinal anastomosis, than it is for them to go anywhere else, we will not have the vicious circle occur. Likewise when we obliterate the proximal loop between the stomach and the enteroanastomosis, we are not so much seeking to prevent the discharge of its contents into the stomach, as we are to keep the stomach contents out of it. It is the rarest thing in the world not to find the proximal

loop distended and the distal loop collapsed at an operation undertaken to relieve the chain of symptoms known as the vicious circle.

In the class of cases I am discussing now it is more than probable that the proximal loop becomes filled more by way of the pylorus, through the normal peristaltic action, than it does directly from the stomach by antiperistaltic action through the gastroenterostomy. If, therefore, we occlude the pylorus, we shall in all probability make it easier for the stomach to empty itself through the gastroenterostomy by normal peristalsis into the distal loop than it will be for it to empty itself by antiperistalsis into the proximal loop. The bile and pancreatic juice discharged from the proximal loop into the stomach, will readily find their way out again by peristalsis into the distal loop; and, as remarked before, this factor is much less to be feared than is the reverse action—discharge of the stomach contents into the proximal loop by antiperistalsis. But if the occlusion of the pylorus is not in itself sufficient to overcome the vicious circle, then the proximal loop must be obliterated close to the stomach, and exit for its contents into the distal loop provided for by means of an enteroanastomosis. I recommend occluding the proximal loop close to the stomach because I am so thoroughly convinced that the mischief is caused not by the discharge of the contents of the proximal loop into the stomach, but by the antiperistaltic discharge of the stomach contents into the proximal loop, and this we wish to avoid.

We sometimes meet with instances of the vicious circle which more imperatively demand relief than those patients just mentioned. In other cases the vomiting is persistent from the time of the operation, emaciation is rapid, and unless something is speedily done to relieve the patients, they will die of exhaustion and inanition. It is no doubt true, as has been remarked by Richardson, that there are certain patients whom no manner of surgery will cure, who are doomed from the first to die under any circumstances. This is rather a pessimistic view to take, and as the surgeon can never be certain that his patient belongs to this doomed class until he is actually dead, I think he should act in accordance with the motto "While there is life there is hope." For my own part, I do not feel comfortable to let my patients go steadily down hill without interfering to relieve them as far as I can; and reoperation is, I think, not to be postponed too long in such cases. Of course gastric lavage should first be tried, and all the other medical measures usually employed in cases of postoperative vomiting. But operation should not be postponed so long that the patient's strength will not be sufficient to withstand the shock; and, on the other hand, too extensive an operation should not be employed on such debilitated patients. To reopen the wound, pass a silk suture around the pylorus, tie it, and again close the wound, consumes very little time; and if relief is not thus obtained a third operation can be done, at which the proximal loop can be tied off between the enteroanastomosis and the stomach. I should myself very much prefer to reoperate twice and have the patient ultimately re-

cover, than to prolong the first operation until no chance of recuperation remained.

The exact procedure to be adopted at the secondary operation will of course depend upon the technique employed at the primary operation. If no enteroanastomosis was done at the first operation, this will probably be the proper thing to do first on reopening the abdomen. If this has been done, then I think ligation of the pylorus should be our second choice, and ligation of the proximal loop should be reserved to the last.

I have seen certain patients who suffered discomfort after gastroenterostomy, and who occasionally had regurgitant vomiting, who were completely relieved of their symptoms by wearing a light abdominal belt. On removal of this support the symptoms recurred. These factors I have explained on the supposition that the long proximal loop dragged on the gastric anastomosis and became so to speak waterlogged; and that this condition was overcome by supporting the proposed loop by means of the abdominal binder.

As I have already said no one factor is always operative in producing the symptoms of the vicious circle; and no one method of treatment will suffice to effect a cure. Prevention is the best treatment, and that this is accomplished as nearly as can be by posterior gastroenterostomy with the short loop, I think has been demonstrated. But when the vicious circle does arise, it requires energetic treatment, and happy is the surgeon whose treatment meets with success.

My experience embraces five cases of vicious circle in which there was left a long loop of jejunum; all these five patients were operated for the correction of this condition. In three of them an enteroenterostomy relieved the condition entirely; in one an enteroenterostomy with tying off of the pylorus corrected the condition; and in the fifth it was necessary for me to do four operations; the first consisted in relieving adhesions at the site of the gastroenterostomy anastomosis, which was followed by temporary relief; a second operation consisted in an enteronastomosis; a third in the relief of adhesions; and a fourth in tying off of the pylorus. This patient recovered.

1634 WALNUT STREET.

WATER AS A LOCAL ANÆSTHETIC.

By JOHN A. WYETH M. D.,

NEW YORK,

PROFESSOR OF SURGERY, NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

When Schleich's method of infiltration of the tissues with very weak solutions of cocaine came into use I became convinced that the loss of sensation was due more to the presence of the water than to the cocaine. With this in mind I injected into and beneath the skin of my arm a dozen minims of plain sterile water and was enabled to cut through the skin in the infiltrated area without pain. There was a momentary stinging sensation due to hyperdistension as the skin was bleaching under the pressure of the water. For the last two years at various times I have made these demonstrations in the course of postgraduate teaching at the New York Polyclinic Medical School and Hospital.

The following two cases illustrate the method, and they are reported with the object of calling the attention of the profession more especially to this subject:

On October 19th, 1905, a professional friend consulted me in regard to a tumor situated in the median line of the back just over the junction of the sacrum and the last lumbar vertebra. It was a movable, nearly round mass, being about an inch and a half in its longest and about an inch in its transverse measurement.

I advised removal by local anæsthesia with water, to which the patient consented, and the operation was done in the presence of a number of physicians at the Polyclinic. I employed one of the steel syringes made for me by the Kny-Scheerer Company for the injection of boiling water for the coagulation of vascular neoplasms. This method I introduced to the profession at the New Orleans meeting of the American Medical Association in 1903.

A small-sized hypodermic needle was employed and this was inserted in the proposed line of incision, the point resting in the substance of and not beneath the skin. About ten minims of water was forced through by pressure on the piston, the skin assuming a deathlike pallor. The needle was further projected and more liquid forced out. This was continued until a line two inches long was completely anæsthetized, when the skin was incised down to the capsule of the tumor. The needle was then thrust between the capsule and the subcutaneous areolar tissue and water freely injected so as practically to lift the skin from the tumor. The needle was further inserted between the base of the tumor and the underlying connective tissue. These injections cut off the entire nerve supply in the area of dissection. As this patient was a very intelligent physician of large experience I asked him to make a statement as to whether or not he experienced any pain. He writes: "I did not feel any pain at any time during the operation nor during the insertion of the sutures. I did not believe that the operation could be made painless."

The microscopical examination of this tumor by Professor F. M. Jeffries of the pathological laboratory demonstrated the fact that the growth was an epithelioma originating either from the sweat glands or hair follicles.

A few days later I removed a small papilloma from the back of a man about forty years of age. The technique was as heretofore described, and the result was entirely painless.

In my opinion the anæsthesia results from the absorption of water under pressure by the end organs of the sensory nerves, destroying temporarily their conductivity.

Dr. S. G. Gant, of New York, informs me that he has used this method extensively in operations about the rectum and anus and with great satisfaction.

19 WEST THIRTY-FIFTH STREET.

THE STRENUOUS LIFE OF SCHOOL GIRLS.*

By WILLIAM P. NORTHROP, M. D.,
NEW YORK,

PROFESSOR OF DISEASES OF CHILDREN IN THE NEW YORK UNIVERSITY AND BELLEVUE HOSPITAL MEDICAL COLLEGE, ETC.

I have much satisfaction in discussing with you a subject which comes near to being the most vital to us all. It is the strenuous life of our school girls, with suggestions as to how we may assist the growing child to meet it. By school girls I here

* Read before the Medical Society of the County of Kings, November 21, 1905.

mean those from eight to thirteen years of age, and I arbitrarily limit it to those attending public school.

It concerns the state of health during that critical period of growth in which there are many factors tending to the future weal or woe of the developing youth and mature adult. It concerns the beginning of systematic education, of mental discipline. It furthermore concerns the enlistment into a life of comradeship, of drilling in ranks, of comparing abilities, and of testing strength. It is the beginning of strenuous competition. In its totality it concerns the time of life in which begins the building of the American citizen. Tell me, is there a more important period of life, stretch of five years, is there a more important function for the physician? He who reads the daily papers, and watches the slowly changing map of the world must think, with many searchings into home conditions, of what American citizenship obliges. Nobility of character obliges, likewise American citizenship. The public school is the maker of citizens. We might with profit here even bring out the dusty old oratory, and repeat the well worn phrases concerning the district school, the cradle of American liberty.

To us as physicians belongs the task of assisting the little volunteer to endure the strenuous life of camp and drill, and even to grow strong as the campaign goes on. We hear so much just now of saving soldiers from sickness in war, it becomes a reproach when an army is decimated by disease. As I write, editorials are pressing home the lessons applicable to the building of the Panama Canal. They rehearse the failure, and point to the errors. Digging and "making the dirt fly" was once the only object. Properly selecting the men, housing, feeding, and amusing them, was not apparently building a canal. The laborers died. Depression of spirits and homesickness killed what malaria and typhoid passed by. If the great endeavor now ends in success it is because sane and sanitary methods are thought out by competent minds and carried out by proper authorities. They make the filth fly first.

What may the medical department do to help our little recruits to endure the campaign? How assist the little workers to sustain the strenuous life of the first school days? In school work we may not select. We must take all volunteers, and furthermore keep them able bodied. We must keep them fit for the firing line, and return them veterans. They should even grow and get hard in the training. School life should teach them the care of themselves; addition of fractions should apply also to the daily accumulation of knowledge and physical endurance. It is only secondarily our function to look into the lists of studies and requirements with a view to modifying them. Our department is wholly medical, or perhaps better physiological. We should not wait till medicine is needed. The twentieth century call is for prophylactic measures.

In March the pædiatric and neurological clinics of New York receive a crop of worn out school girls—neurasthenics. My own experience is so annually regular that I have fallen into a routine method of impressing the lesson upon the student. The method will appear in the following narrative of a typical case:

A girl, nine to twelve years old, is brought by her

mother to the clinic on Saturday. As the girl stands in the amphitheatre she is seen to be pale and jerking. To you she obviously has chorea. "What is your name?" I ask, and she glances at her mother with an imploring look. "How old are you?" No answer. At this point there is room for a little maneuvering. I turn to the class and begin somewhat like this: "This little girl goes to school (a sidelong glance detects a light in her eye); she can read pretty well," I continue, "and spell fairly." (A few jerks and grimaces, and a look at her mother.) Then I add in positive tones and in rapid succession: "She stands at the foot of her class, and is frequently late at school." At this point the jerking stops, the grimaces cease, and with complete absence of all self consciousness she flashes out: "No, ma'm; I'm never late, and I'm *first* in my class." Here a reconciliation is effected, and we are friends. Further indirect questioning brings forward the facts that she sits, not in the front seat, under the eye of the teacher, but on the back row where the trusted ones sit, those having fixed purposes in life, those with records to sustain. Further questions successfully bring out the information that she hurries home from school, is never kept late, takes a few minutes of outdoor play because some one has prescribed it, runs home, curls up, and studies hard till the evening meal. This meal she engulfs in the shortest possible time, slips off her chair, and is soon discovered at her book again. She is the conscientious pupil. She studies till some one insists on her going to bed. At this point in the interview I have been frequently interrupted by the interested mother, who openly volunteers the information, entirely forgetting the presence of students, and much to their amusement: "Yes, doctor; and I often find her in bed studying, or find the book under her pillow."

A few more words about this annually recurring, spring case. Early in the morning, after a night of dreaming hard over those awful fractions, or, I am told, more especially over the least common multiple or the greatest common denominator, our pale, jerking, and grimacing girl awakes again to the strenuous demands, and studies till breakfast. One eye is on the clock—even the clock might be wrong for once, and she must not be late. She must have her hair braided tight, and it is not tight, till the scalp moves rearward and the eyebrows lift; she must have her waist buttoned up the back, she must be all ready before breakfast, however busy the mother. She glances occasionally out of the window to see if her competitor over the street has started for school. She hopes breakfast may not be late. It never has been, but it might be this once, and just once would spoil her record. If she is in doubt, the breakfast is the straight stretch, in the engineer's language, on which she can make up lost time. By long experience she learns what portion of the food on the table will traverse the upper digestive ways the speediest. Potato and gravy, with a liberal wash of water, is the one most approved by the record breakers. Fried meats are too slow, bread does not rank high. Coffee or tea may take the place of water. In an incredibly short space the child has finished her intake of food, and stands ready for the start. She must not be late. As the last articles of dress slip into place she spies her competitor across the street setting off for school. Nothing can hold her now, and she dashes off like a fire horse on a hurry call. The fat lady loitering at the front door sees a slight little figure flash by, and remarks what a good child the top floor neighbor has. The good girl has at last, after an anxious and strenuous preparation, arrived at school, and it proves to be by accurate clock three quarters of an hour before the last bell, and fifteen minutes before the doors are open. Three quarters of an hour before time, and all

this race and haste, worry and running, but—she keeps her seat, and her record is unbroken.

This audience can easily imagine several physiological functions impaired by worry and haste, and some daily needs possibly postponed till Saturday and Sunday. They will wonder where the dweller in crowded districts may, in such strenuous life, snatch a few hours of tranquil daily recreation in outdoor sunlight. They may wonder how the nerves in this strenuous existence are to be daily, completely nourished and rested. Alas! They are neither rested nor nourished. They fall daily further into arrears. They may drag on till early spring accounting. In March is the feast of St. Vitus.

It is well to reflect on the critical physiological changes which our little student is undergoing between eight and thirteen years of age. She is manufacturing rapidly new cells, she is building great additions in bone, muscle, and glands, she is developing, training, and disciplining her cerebrospinal and sympathetic systems. She is changing her milk teeth for tearers and grinders, preparing for heartier food. She is further developing a new function, passing from infant life to maturity, experiencing a change of such critical magnitude that all nature appeals to the generous impulses of human protectors to lighten her burdens, to safeguard the best interests of the budding woman and future mother.

It is for others to discuss the shortening of hours of study, or interrupting them with longer intervals of recreation. There are wise heads considering the subject. I can only say the present public school course and competition give the sensitive, conscientious child a strenuous life. In every team the quicker horse jumps first, the willing horse foams under the harness. The scoldings administered to the dullards of a class pierce only the souls of the sensitive. The conscientious are hurt by reproaches intended for those whom they never reach. Our attention is not just now called to the lazy, the lethargic, the truant, or robust. It is to the delicate, the sensitive, the conscientious little worker, whose dreams of lessons impair sleep, whose nervous tension handicaps in the race, whose daily balance sheet of vitality ceases to show a balance against the income of nutrition. Gradual loss of strength reaches its climax, and results in the March crop of neurasthenics, the feast of chorea, dance of St. Vitus.

The ever anxious girl who arrives at school three quarters of an hour before time evinces by this very trait the nerve tension existing. It is a symptom. We may not meet that by a routine method, or by regulation. It constitutes a feature of the problem. The individual case must be studied.

My earnest effort in this paper is that we may think together for the good of the school child in her home. Do not put the subject away with the thought that the story of the overworked and undernourished growing girl belongs only to a big city, to the tenements, and to ignorance. Would it were limited to them, for they are most teachable and quick to reform. If you look to your choicest families you will often find them getting up late, that breakfast is late, that the father rubs his swollen eyes and scolds between his morning paper and his

coffee, because of this disagreeable rush and haste. His last night's nerves are disturbed by his child's early morning start. You will agree with me that in many of your most intelligent families the child's life and duties are not the first consideration of mother or father. The girl begins her first strenuous life in unsympathetic surroundings, gets up a high degree of momentum in the midst of inertia. Only in Wall Street will nerves again be found so thoroughly atingle. If this be the case with our best families, how much more is it true of the crowded tenement.

I ask you to think with me and to look into the school life of the girls with a view to helping them endure their work. Public school work is most strenuous. Home arrangements should be modified to contribute to the needs of the pupil, with attention to moral atmosphere, to food, airing, recreation. I have no patience with the parent who says in word or action: I will not put myself out for my child; my parents did not, and here am I. My comfort has been earned; I intend to take it.

This paper takes it into primary consideration that the child of the family is the one valuable possession. I am happy in recognizing that it is not the current idea to underestimate the position of the child in the family. Former tribal conditions in which the child was relegated with hirelings and dogs to the corners and upper floors need no regretful reminiscence. Still there is room for improvement. The morning meal should be taken in pleasant surroundings, in cheery atmosphere. The breakfast hour should not be the scold hour, the clearing house of yesterday's grudges, nor the unloading of the dumps of bad humor. The girl should have time to eat, time for reasonable preparation for school, and be sent off happy. It will pay the parent to do so. It will save the doctor's bill and save anxiety. In its stead will come joy and pride in the pupil's progress and steady growth. It is an investment for the parents' future which not even a great corporation can give. It pays immediately something, and promises sure paid up investments in the near future.

Not one physician here present but can easily recall cases in which the girl, after six hours of school, practices one to two hours on the piano, goes to dancing school twice a week, has some added lesson at intervals. On Saturdays there are children's parties, matinées, often children's excursions for concerted studies of this or that. All these are well enough, but they leave the girl scarcely any time for relaxation and out door loitering or light exercise. From the first days of term they have insufficient sleep, become deeper and deeper in debt to it, as a consequence becoming more and more nervous, more intense, irritable, impatient. Their attitude towards work reminds one of the old law of the ball rolling down hill, uniformly accelerated motion, I think it was called. The members of our profession in their own lines know the result of that law. At the beginning of summer, in our tired condition, we think we cannot take the time for a vacation, and in the fall, when rested and sane, we care little if we never get to work again.

Incidentally contributing to unstable nerves are, progressively, impaired digestion, imperfect evacuation of the lower bowel, and consequent absorption

of secretions and excretions, with deleterious effect upon the general nutrition and upon the nervous system especially. So often these girls have headaches, sore throats, getting pale and sallow as the year goes on. They suffer in many ways of which we are apt not to take account. Think how often we see these little soldiers, in strenuous campaign, wearing those torturing dental plates for straightening the row of teeth.

I am heartily in sympathy with the school supervision which looks to the condition of the eyes and lids, correcting errors in refraction, insisting on treatment of conjunctivitis long before the degree of trachoma. I likewise recognize the good work in the direction of the throat and nose adenoid growths, enlarged tonsils, saving the ears while there is yet time.

Japanese sailors about to give battle cleanse their skins, clothe themselves in fresh, clean linen to avoid contamination of possible wounds. Our little volunteers must have clean throats to withstand infection, to reduce susceptibility, healthy Eustachian tubes, keen eyesight, to do good service in the five-hour daily encounter with oral dictation, with books, blackboards and charts. Happily all these are properly appreciated to-day and attended to. It is one of the noblest works of the time.

The subject of school hygiene is large, and I have purposely refrained from attacking it as a whole. Much is being thought out in the line of ventilation, air space for each scholar, etc. My special interest, as some of you may remember, is providing roof gardens where the children can play games in an upper air comparatively free from dust, free from dangers of collision and accident of the street, free from the contact of vicious and unclean passers, or worse, those who do not pass—loafers.

The subject of dividing the hours so that the youngest children shall have short, consecutive hours and frequent intervals of air and exercise needs consideration. This is now under collective investigation. In large cities where it is a choice of two evils it is often better to corral the small children frequently and briefly, than leave them to roll in tenement halls or play under feet in crowded and squalid thoroughfares.

The subject of heating and ventilation I avoid. Spell it overheating and faulty ventilation. Dry sweeping of school rooms is another wretched infraction of all hygienic rules. These subjects are inherited traditions. Lest we lose our way amidst the winding paths let us leave till another time school room hygiene and confine ourselves just now to helping the child in its home life. This phase of the subject has not had its innings.

In many families there is a habit of sitting up late. No particular reason exists for it—they simply acquire the habit. Children either sit up with them and because they do, or, if they go to bed their early sleep is disturbed because of the bright lights, noise, and confusion. The family physician in fathoming the causes of failing health may well dig among the details of daily life for explanation. A word to the wise. Further causes of worry to the child are indiscreet conversations of the parents. At breakfast the disgruntled father utters a chance remark that the family is rapidly nearing the poor house, that all is lost. Having uttered it, he goes out

into the open air, humming "Annie Rooney," and quite forgets what he has said. Not so his little girl. The unmeaning remark sinks into her mind, she broods over it, her breakfast does not digest, she furtively weeps, and at night sobs herself to sleep. This needless apprehension arises from a thoughtless remark which adults would entirely understand, and would label "talking through the hat."

Our thoughts to-night are upon keeping the brain clear. Keen intelligence waits on good digestion and good blood. Judgment depends upon good nutrition of brain and nerve. Most of our mistakes in adult policy and behavior are due to exaggerated irritability. The good work of a day can be undone by tired outbursts of temper at night.

I ask you as family advisers on all questions of health, and often of education, to think what you may do to aid the ambitious, overworking, worrying girl, to endure her school work, to keep her place in the rush, to grow strong in the campaign, to get past the March crisis, and end the year in the fore rank. Successful ending of a long, strenuous year helps build the habit of success. Habitual success makes for ambition and for character. Remember always that most girls want to go to school, are unhappy if they cannot, that work is good for them, that mental occupation is a healthful exercise, that under proper environment a rational attention to their physical needs is all that they require. Let us try to help them. Begin in the early fall when the air is mild, and accustom the teachers and pupils to a plenty of fresh air in the room, a gently circulating, cool, fresh air. It is easy advice to interdict school work. It is too easy. Remember, again, that removal from school takes away the great interest of the little one's life, consigns her to the invalid corps, discourages her, makes her despondent that she is not like others.

Do you remember the cry of the British soldiers: "On to Pretoria"? The one thing that pushed a tired trooper to his last exertion was the desire to keep up, to keep his place in the rush for the capital. Even the poor fellow who fell ill on the way shouted at intervals in his typhoid delirium: "On to Pretoria!"

We must reckon with the girl's ambition, foster it, not kill it; guide it, not thwart it, and work together to aid the child to begin and end its year aright.

57 EAST SEVENTY-NINTH STREET.

APHASIA, HEMIPARESIS, AND HEMI-ANÆSTHESIA IN MIGRAINE.

By SMITH ELY JELLIFFE, M. D., PH. D.,

NEW YORK,

VISITING NEUROLOGIST, CITY HOSPITAL; ASSISTANT IN DEPARTMENT OF NERVOUS DISEASES, COLUMBIA UNIVERSITY.

Migraine has been written upon by hosts of writers. A glance at any historical résumé of the writings on this condition from Arætius, who, Kovalevsky tells us, was the first author to write about this condition, to the present time, gives one the impression that too much has been made of a very prevalent and protean affection, yet the observation of three cases of this disease showing certain rarer phenomena has tempted me to make this short casuistic contribution.

Aphasia in Migraine.—This is by no means an uncommon occurrence. Charcot made a number of contributions on the subject, and many reports of cases are on record. The following history has some interest because of the close observations made by the patient:

CASE I.—J. S., male, 38 years of age, was seen in consultation for a chronic migraine. So far as could be ascertained no similar trouble had been observed in his family. There was no neuropathic tendency in the parents. Neither was alcoholism or gout present. He had always been healthy. The migraine began at about the age of fifteen years, and has been constant up to the present time. The attacks are almost stereotyped. There is a preliminary sense of chilliness and mild malaise. Then distinct fortification spectral scotomata develop, which are almost invariably crescentic, opening to the right. In its initial stages the scotoma is described as a slight blurring; then a dancing, finally the scotoma enlarges and becomes more defined. It is invariably bilateral and in the beginning interferes with reading, blotting out the after images and lateral retinal impressions as the eye passes along the printed line. In all essential respects, the drawings, many of which he had made, agree with those described by Lamy, Gowers, Moebius and others. Faint sensations of dulness in the head are present, and in thirty minutes almost to a second after the initial eye signs, a splitting headache develops, and the scotoma disappears. The headache persists from one half to four hours and is not accompanied by vomiting, although gastric uneasiness is not uncommon. About 5 per cent. of the headaches are typical hemicranias. Polyuria is common during the attacks. These are very readily aborted and controlled by the analgesic antipyretics, antipyrine giving the best results.

These are his usual attacks. They have varied very little for twenty or more years, save in the matter of frequency. At one time in the patient's life they came on daily, almost invariably at eleven o'clock in the morning, and seriously interfered with his college work. Although some astigmatism and hypermetropia were present, the patient never wore glasses and bore with his headaches as though they were to be taken as part of life. They were not very severe in this period, however. Since entering later into business and professional life marked by very varied activities, involving, however, double and triple the former necessity for eye work, the headaches have diminished in frequency to monthly or quarterly visitations.

Two of the attacks in the twenty years have been marked by the occurrence of an early and transitory aphasia. In point of time the aphasia has followed closely on the period of beginning chilliness, and just before or coincident with the beginning of ocular phenomena. In both attacks the aphasia persisted only about five minutes. It is not improbable that aphasia might have been observed in other attacks, but the patient had not been called upon to talk at those times.

One attack came on at a school commencement, early in the history of the migraine. It was not the patient's stage fright, for he had become a comparatively accomplished elocutionist, as young boys go. He says that he did not forget his "piece"—he knew it perfectly, but he simply could not say it. He would start a line, and at the third or fourth word would struggle to pronounce it. Prompting was of no avail. He could not get over a certain word; it was a fence, as it were, obstructing his further progress. The attack did not cause his complete discomfiture, as it passed off and he was able to go on and finish his performance. He remembers the onset then of a very severe headache, which was attributed by his fond parents to the excitement attendant on his difficulties.

A second attack occurred while riding in an Adiron-

dack stage with a party of fellow campers. He noted the onset of the chilliness and beginning ocular phases and knew that it was a precursor of a headache. One of the party noting a series of survey posts along the road asked him what they were, and he started to explain. At the word "surveyor" he stumbled, and notwithstanding several attempts to get it out, he suffered from a complete motor aphasia with reference to the word. Whether the aphasia would have been more extensive he was unable to say, as his recognition of his disability to pronounce this word led him into a discreet silence after the mental excitement attending his preliminary failure had abated. In a few moments his aphasia disappeared entirely.

Notwithstanding the recurrence of his migraine at constantly decreasing intervals of time intermission, no further occurrences of asphasic phenomena have been noted. It is worthy of comment that the type of aphasia conformed to that so well discussed by Charcot, Kovalevsky, Moebius and others.

Hemianesthesia and Hemiplegia in Migraine.—Two patients have been under observation, one for four months and another for a year, in whom severe hemianesthetic and hemiplegic phenomena have been observed. In the first patient I am unable to rule out hysteria entirely. In the second I am unable to find any hysterical stigmata.

CASE II.—J. D., a musician, 35 years of age, well known in his profession and respected. He says that since childhood he has had attacks of severe headache, and even as a small boy remembers being unable to go to school on account of the severity of his headaches.

Of late years, however, they have been occurring more frequently and the pains have been more and more severe. Frequently he is confined to bed for three or even four days and during this time he suffers acutely. At the present time the attacks are about monthly. I have observed him in two attacks, although I have known of his attacks through his wife for at least ten years.

The migraine usually begins insidiously. Heaviness, constipation, a foul tongue, and general malaise are felt a day or two previous to the attack, at least the patient says that he knows by these signs that the storm is coming. With the onset of heaviness in the head he becomes, as he expresses it, partly blind. No precise history of distinct scotomata can be elicited, however. He cannot read a note, not because of true blindness, but as a result of intense distress. He then observes the onset of a headache, almost invariably on the right side of his head. The pain, at first dull and boring in character, becomes sharp and excruciating. It even, he says, runs down to his arm, across the back of his head and into his neck. His body is frigid and stiff, but more particularly his right side becomes cold. His lower eyelid on the right side becomes very pale and blue and occasionally his eyeball protrudes. Later there is palpebral oedema; sometimes the eyelid remains black as though contused. His right leg becomes weak, and he becomes unable to walk or dress himself—all the time suffering from excruciating pain. His inability to do anything is conditioned by his pain, which is exaggerated by reason of a hysterical temperament. As the pain subsides he notes, after a day, a pricking and numbness in his right leg, and particularly in his right arm, and he avers that accurate measurement of that arm shows that while it is cold and numb and lifeless it is at least one half inch less in diameter at the biceps and the forearm than when he is in normal health. This is later followed by a swelling of his fingers and partial oedema. His wife tells me that he has been cross-eyed in some of the attacks, but I have not observed this. During the attack the patient is frequently beside himself. He cries and fears that

he will not get well, and has considerable emotional disturbance.

His recovery occurs in from three to four days, when he is able to go on with his usual work. I cannot entirely exclude a hysterical element in this case, but present it hastily for what it is worth.

CASE III.—H. L., a youth of nineteen years, presents, to my mind, a very remarkable condition, and a history of migraine that is somewhat unique.

He has always been a healthy boy of exemplary habits, but has been growing very rapidly. At the age of ten years he fell on the ice, and a crack on the head made him unconscious for a few hours. Six months before I saw him he fractured his leg. Other than those he has had no illnesses. He left school comparatively young, and has been in the office of a broker, a relative of the family.

On the day of his first attack he felt in the best of health, had eaten well and slept well. On the morning of this illness his mission was to obtain the current quotations of the brokers on the "curb." At about eleven o'clock he was writing the prices of the different stocks on a small pad when he commenced to feel queer and found that he could not control his fingers to write down the prices. He commenced to feel weak and sick and his right side was cold. He started to walk back to the office, a few blocks distant, and noted that his right foot was very heavy and dragged. He was just able to get in the elevator and up to the office. He was dizzy and vomited on getting back to his desk. He tried to explain to his brother what was the matter, but his speech was thick and incoherent. His brother could not understand him, and sent him home in a carriage. Dr. J. W. D. Maury, the attending physician to the family, was called in.

Dr. Maury reports the results of a physical examination, four hours after the onset of the attack, when he found that there was marked thickness of speech and irregularity of the pupils; the right being larger than the left. He did not find any hemianopsia. There was very severe splitting headache, and the reflexes on the right side were all increased, including the knee jerk. There was slight ankle clonus, but no Babinski. The cremasteric reflex on the right side was very active. There were no bladder nor rectal disturbances. The patient was unable to walk, the right arm and leg very distinctly weak, although the patient had voluntary control of his movements. Early in the trouble Dr. Maury thought there was some slight homonymous hemianopsia, or at least an amblyopia.

The physical examination made by myself at seven in the evening showed the patient in a much better condition. There had been some vomiting throughout the day. The headache persisted. It was of a very intense splitting nature, and was generally located in every part of the head, although more accentuated on the right side. At that time there were increased reflexes on the right side throughout. There was marked unilateral sweating, confined to the right side. Otherwise the examination was negative. There was no hemianopsia, no inequality of pupils, absence of sensory disturbances. There was very marked bradycardia, the pulse being 40, and the pupils distinctly and equally dilated, the conjunctivæ evenly congested.

A provisional diagnosis of migraine was made at this time. The patient slowly recovered; all signs of disturbances of speech and paresis gradually cleared, and the pulse finally rose first to 50, then to 60, and at the end of 36 hours was normal. The urine was always negative.

The patient was well from this time to the 5th of November, 1905. On that day, a Sunday, he left home at nine in the morning to ride horseback. About 11:30, while still riding, he says he began to feel dizzy on the horse and decided to go back to the stable. Things

commenced to be somewhat blurred, and on close examination of this symptom it was evident that he had the scintillating scotomata of migraine. He urged his horse back to the stable, but tells us that for some reason or other it took an hour for him to go a distance which would ordinarily have been covered in twenty minutes. He says that during this time he felt stupid, and noticed that he was unable to hold the reins, which he held in the right hand, for any period of time, as they would drop, and he would not notice they had fallen. And the horse, after being urged into a gallop, would lapse into a walk without his noticing it. On getting back to the stable he still felt very dizzy, and vomited once while in the stable. After lying down for a few minutes he started home, taking the subway. He remembers offering a five-cent piece to the ticket chopper and wondered why he wouldn't take it, but finally appreciated that he must buy a ticket, and did so, but does not remember having done so. He was capable of getting off at his own station, but during all this time felt that he was going to be very sick, and was dazed and chilly. He had difficulty in getting up the subway steps, fell once or twice, and was just able to get home, when he went to bed. He remembers talking to the elevator boy, but that worthy was uncomplimentary enough to suggest, when spoken to about it later, that he thought the patient had been drinking. The patient does not remember taking off his shoes, but thinks he recalls waking and being in bed. In reply to the anxious inquiries of his parents he said that nothing had happened, he felt sick. For half an hour he was able to reply to questions, and did so in a thick, confused manner. At this time, 2:30, three hours after the onset, he was seen by Dr. Maury.

The patient had just lapsed into unconsciousness and did not know him. His face was dusky, but the color was not bad. The eyes were equally contracted, responded normally to light, and both turned equally to the side. There was no strabismus nor distortion of the face. There were marked, though slight and slow, athetoid movements of the right hand, and ankle clonus sufficient to shake the bed. The attack was distinctly not epileptic in its clinical character. He reacted to a pin prick on the left but not on the right side, the right leg and arm being very anæsthetic. He had passed no urine. His pulse was weak, 80; respiration, 12; temperature, rectal, 98.6° F. The patient vomited some odorless mucus twice during the first half hour of unconsciousness. A half hour later he closed his eyes when they were forcibly opened, turned his head to the right and lay flexed in bed, his arms and legs curled to the right side—the picture of cerebral irritation. His temperature was 98.9° F., his pulse full and irregular, 60, respiration fuller, 17. His nose was blue and cold, and the upper eyelid on the right side and the right hand were also cold. There was marked dirotism of the radial pulse.

At this time he was seen by Dr. Blake in consultation. The heart was very irregular, the eyes slightly and evenly contracted, there was a coarse tremor of the quadriceps on both sides, more marked on the right side. The patient repeated a sentence which was spoken by Dr. Blake, but could not be roused to full consciousness. At 7:10 p.m., eight hours later, he opened his eyes and asked quietly where he was. He complained of extremely severe left sided hemicrania, and asked for food. There was more or less anæsthesia over the whole body, but it was more marked on the right side. There was very marked photophobia. The knee jerks were slightly increased.

I saw him at eight in the evening, in consultation with Dr. Maury, when he was in much the same condition as on the occasion of my former visit. He was perfectly conscious, complained of severe hemicrania, had no paresis, no loss of power on either side, but a

distinct anæsthesia throughout the right side. His pulse was 60, full and bounding; respiration normal; reflexes somewhat increased throughout the right side, no Babinski, no clonus, right cremasteric very active. He did not urinate for 14 hours and had to be catheterized. There were no disturbances of heat or cold sensations.

The patient has slowly gained from this time, having stayed at home in bed four or five days. Since getting up and out, there seems to be no trace of organic impairment.

So far as transitory aphasia in migraine is concerned, it cannot be considered a rare phenomenon. As stated, Charcot¹ has contributed widely to the subject and has brought out some of the characteristics of this type of aphasia. It is an intermittent, halting aphasia. At times the patient can say what he desires, the next moment, not. He stumbles on a word, as did the patient in case I; he sometimes confuses words, monsieur for madame, etc. In rare instances is the aphasia of more than transient duration.

A reference might be made to the vasomotor symptoms of the second patient, for I interpret this case as one in which the migraine is caused by marked vasomotor spasm, followed by dilatation of the vessels. The spasm, it seems, must be either bulbar or possibly in the internal capsule. To have a generalized spasm over the entire motor and sensory area implies a much more extensive reaction than seems probable in this condition. The involvement of the face, the dilatation of the vessels of the eyelids and eyeball, as well as the arm symptoms, might readily follow as a result of angio-spasm of the middle cerebral artery.

Meige² at the Pau Congress, in 1904, reported the history of a patient with migraine, in which there was hemianopsia and transitory aphasia with motor paresis of the right side of the face and swelling in the right arm. At the end of his attack the patient had a slight paresis of the right side of the face and a slight hemifacial œdema. He also showed a distinct tic like winking movement of the eyes with photophobia.

I have observed this photophobia and spasm like closure of the eyes alone in a number of cases of even mild migraine, but Meige's patient is of interest in that the winking movements became almost obsessional and were persistent.

The trophœdema in Meige's patient corresponded very closely with the trophœdema of the patient of case II. Transitory œdemas have been observed by others. Meige further calls attention to the resemblance to a progressive hemiplegia in this particular patient. Certainly case III in the present series might well have been diagnosed as a hemiplegia in the early stages of his migraine, so severe were the paralytic phenomena. As for the palpebral œdema which, which was a marked feature in case II, Mollendorf³ as early as 1876 made several observations on this phenomenon, and it is not to be considered an unusual symptom of severe migraine. I have never seen so severe a palpebral œdema in a migraine as in case II. At times the black and blue appearance will persist two or three days.

¹ *Lecçons*, III, pp. 39 et 70.

² *Revue neurol.*, 1904, pp. 942-961, reported in full.

³ *Ueber Hemicranie*, *Virchow's Archiv*, 1876.

Flatau's⁴ remarkable case, in which there was hemicrania with hemianæsthesia, aphasia and motor weakness, occurred in a patient who had had severe bulbar symptoms following a typhus which was in turn followed by smallpox. There were residual organic changes in the speech and swallowing mechanisms.

So far as the persistent ocular paralyses are concerned, constituting one of the phenomena of the ophthalmoplegic migraine of Moebius, and so well described by him in 1888, as well as by Charcot and others, it is unnecessary here to enter into their consideration. The history of occasional crosseye in case II is suggestive, but I have never observed it, and hence will not enter into this interesting symptom group classed with the migraines, although often spoken of as forming an independent group.

Facial palsies are almost constant accompaniments of the ophthalmoplegic migraines, but isolated cases, apart from the eye involvement, are known. A striking report is that of Rossolimo.⁵

The patient, a woman, was subject at the menstrual epochs, to distinct vasomotor disturbances. She suffered from migraine at these periods, and had had four attacks of facial palsy in the course of the migraine. This patient showed both right and left sided paralysis. The patients of cases II and III were both affected on the right side. L. Demichieri⁶ reports two instances of alternating facial paralysis in ophthalmoplegic migraine.

Thus one may conclude that practically all of the phenomena as observed in these patients have been noted by other observers; but it is my belief that they are probably more common than even a comparatively rich literature would seem to indicate. In case III the diagnostic features were particularly suggestive and perplexing; moreover, it seems not unlikely that one may expect to obtain, from this history, further attacks of the migraine; and it is not outside the limits of possibility that more severe developments, even epileptic phenomena, may further complicate the picture.

64 WEST FIFTY-SIXTH STREET.

Note on the Influence on the Offspring of Sexual Excess During Pregnancy.—Ch. Féré (*Archives de neurologie*) says that experience leads him to believe that sexual excess during pregnancy is an important factor in the ætiology of nervous diseases among children who have an otherwise good family and personal history. He cites a recent case of a boy with sexual stigmata of degeneration who had convulsions during dentation and the eruptive fevers, and at the age of eight developed epilepsy and hallucinations of all the senses. Auditory hallucinations were excited by constipation. The family history was of the best, except for two premature births and one abortion. Sexual relations between the parents were the rule during pregnancy. Such relations should, therefore, cease after impregnation to avoid all kinds of malformations, disease, and degeneracy of the child.—(Through the *Journal of Nervous and Mental Diseases*, November, 1905.)

⁴ *Centralblatt für Neurologie und Psychiatrie*, 1902, 746.

⁵ *Neurologisches Centralblatt*, 1901, p. 744.

⁶ *La Clinique ophthalmologique*, September 29, 1899.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at frequent intervals. So far as they have been decided upon, the further questions are as follows:

XLV.—How may interstate reciprocity in licensing be best accomplished? (Answers received up to December 15, 1905.)

XLVI.—How do you treat a sprained ankle? (Answers due not later than January 15, 1906.)

XLVII.—How do you treat whooping cough? (Answers due not later than February 15, 1906.)

Whoever answers one of these questions in the manner most satisfactory to the editors and their advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLIV has been awarded to Dr. W. A. Greene, of Worcester, Mass., whose article appears below.

PRIZE QUESTION NO. XLIV.

THE TREATMENT OF BRONCHIAL ASTHMA.

By W. A. GREENE, M. D.,
WORCESTER, MASS.

Considering all asthma patients to be of a neuropathic temperament, a physician must be a specialist to successfully treat his patient. He must prescribe for him salicylates if the asthma results from rheumatic diathesis; iron if he is anæmic; nerve sedatives, if hysterical, etc. Cardiac, renal, gastric, uterine, or traumatic causes must be investigated. The rarefied air of great altitudes, the moist air of the coast, change from city to country, or vice versa, will cut the attacks short as the idiosyncrasy of our patients vary. Autosuggestion by the physician is of benefit. A patient should use his will to subject attacks. I caution an asthma patient as to the value of hygiene in eating, sleeping, and exercise, and recommend long walks with deep inspirations. Gymnasium and respiratory exercises are recommended by some authorities. There is a pneumatic cabinet of compressed air used by the Germans, the idea being to prolong expiration, effecting contraction and return of elasticity of the alveoli from the transitory emphysema caused by bronchial spasm. The use of the actual cautery in congested turbinates, or sensitive nerve areas along the tract called the "asthmatic area," sometimes effects a cure. Certainly the nose and upper respiratory tract should be included in our treatment, if demanded. Hydrotherapeutical treatment of baths is often of value, but should not be severe enough to cause irrita-

tion of nerve filaments. Sanatoriums are of benefit, owing to regulation of daily life of patient.

The paroxysms should be relieved by the narcotic effect of opium, morphine, chloral, bromides, and others. Morphine or atropine, grain $\frac{1}{150}$, to control the spasm are given hypodermically. Inhalations of ether, chloroform, or amyl nitrite, drop by drop, are of value. Oxygen can be used. Potassium iodide for its alterative effect as well as arsenic are used in the intervals, and must of necessity be of value in metabolic conditions of rheumatism, gout, etc.

During a four years' practice in a small town I saw two cases of chronic asthma in old people. Nitroglycerin, grain $\frac{1}{134}$, was of value in one, and inhalation of the time honored remedy of salt-petre and stramonium fumes were the favorite methods of relief. We must study the individual idiosyncrasy element of these neuropathic patients. Adrenalin by the mouth or under the skin in small doses has been of value. The blood-vessels are contracted and the calibre of the bronchi lessened by its use.

Dr. J. P. Oliver, of Caldwell, Texas, writes:

There are three main conditions to be observed in the successful treatment of bronchial asthma: (1) Treatment during the paroxysms. (2) Treatment during the intervals. (3) Proper observance of the rules of sanitation and diet. 1. Treatment during the paroxysm is directed to the immediate relief of the patient. To accomplish this as speedily as possible, if the patient is an adult, I administer hypodermically morphine sulphate from $\frac{1}{8}$ to $\frac{1}{4}$ of a grain and atropine sulphate from $\frac{1}{150}$ to $\frac{1}{100}$ grain, repeated if necessary in two or three hours. Sometimes if the patient is a neurasthenic I use hypodermically from $\frac{1}{20}$ to $\frac{1}{10}$ of a grain of apomorphine hydrochloride and $\frac{1}{60}$ to $\frac{1}{40}$ grain of strychnine nitrate to prevent excessive depression from the effects of the apomorphine. 2. For constitutional treatment during the intervals the following is used: Potassium iodide, from 2 to 6 drachms; corrosive mercuric chloride, from 1 to 2 grains, 10 grains of ammonium chloride to dissolve the mercury; Fowler's solution, from 1 to 2 drachms; distilled water, ad iiii $\bar{3}$. Misc. Sig.: From a teaspoonful to a dessertspoonful in a medical glass three or four times daily, beginning with the minimum and increasing to the maximum. 3. Avoid stables and overheated apartments, sudden atmospherical changes, especially warm and damp weather, dusty avocations, tobacco in all forms, especially cigarettes; also alcohol in all forms, as this sometimes provokes severe attacks. Nasal passages, mouth, and throat must be kept aseptic. If the teeth are carious, remove them, or have them filled. Flannel must be worn next to the body and the extremities during the winter and early spring. Sleeping apartment should be roomy and well ventilated, especially at night, as the paroxysms often occur from 2 to 4 a. m. Sitting or sleeping in draughts of air day or night should be avoided. Feather beds and pillows for sleeping should not be used. Excessive eating should not be indulged in, especially at night.

Dr. Frederick L. Nelson, of New York, writes:

Treatment of bronchial asthma should be divided into the treatment during the attack and the management during the intervals.

1. The treatment during the attack. The physician should ascertain the exciting cause and if possible remove it, viz., overloaded stomach, filled rectum, smoke, dust, or emanations from animals. Numerous drugs are used, but none are specific. A. Hypodermatically are used atropine $\frac{1}{150}$ grain alone or combined with morphine, the latter only in severe cases, hyoscine hydrobromide $\frac{1}{150}$ grain; adrenalin 4 to 8 m. in a 1 to 1,000 solution. B. Inhalation and prepared powders are helpful when the bronchitis is severe, such as warm vapor combined with hot hand and foot bath; turpentine and carbolic acid in hot vapor; the smelling of spirit of ammonia; inhalation of the smoke from dried leaves of hyoscyamus and stramonium, each 3 grains, belladonna 6 grains, and a small dose of powdered opium; fumigation with sodium nitrite paper. C. As internal treatment is advised hot black coffee; mydriatics, as belladonna when innervation is disordered, or spasm of muscles narrowing the bronchi. A motor stimulant should be given to restore the rhythmical contractions. Chloral hydrate is to be given in large doses, also sodium nitrite, spirit of nitroglycerin, ethyl nitrite. In nasal secretions use a spray with a four per cent. solution of cocaine. touch the pharynx with a mild solution of spirit of ammonia. The administration of these drugs depends on the indications for them.

2. General management during intervals. All causes which complicate the attacks should be removed. The nose is to be examined, also the kidneys, uterus and stomach. Atropine is given to relieve secretions. In prolonged repeated attacks appears dilatation of the right heart, causing venous stasis and low pressure. The circulation should, therefore, be equalized through ergot or adrenalin.

3. If the patient is weak, the general condition is to be treated with iron, quinine, cod liver oil, phosphorus, and nux vomica in ascending doses, the drug must be given continuously without reference to attacks. For the distressing cough lobelia and ammonium chloride are advised.

4. The patient is to live in open air, but should avoid winds, and locations where thermometric variations are extreme. Humidity is bad. He should wear woolen underwear. The functions of the skin and excretory organs and metabolic functions should be regulated. Moderate physical exercise will increase rate of combustion. Guard against indigestible and fermenting foods which will result in gas, constipation, and chemical irritation. Fats and sweets should be stopped, starchy foods if eaten must be thoroughly cooked and slowly masticated. Pork, veal, cheese, malted liquors, heavy wines, and champagne are forbidden. Dinner should be taken in the middle of the day; supper should be light, and gastric digestion should always be completed before retiring. Water is not to be allowed with meals. The climate is a matter of individual experience; some prefer Colorado or New Mexico, others Florida or Southern California.

Therapeutical Notes.

Phenol Camphor Solution:

℞ Acid. carbol. puriss.,.....30 grammes;
Camphoræ trit.,.....60 grammes;
Alcohol. absolut.,.....10 grammes.

M. Paint once a day upon a surface affected with erysipelas; or apply a compress of absorbent cotton moistened with the above to the surface of abscesses, boils, or ulcerating wounds.—(Chlumsky in *Zeitschrift für Chirurgie*, 1905, No. 33.)

Coryza.—Weitlauer (*Les Nouveaux remèdes*, November 8, 1905) advises the following in painful catarrh of the nasal passages:

℞ Sodium salicylate,.....30 grammes;
Powder of ipecac and opium,.....3.60 grammes;
Oil of peppermint,.....1 drop

Ds.: Twenty powders. One powder every three hours until relieved. Later only two or three powders during the day.

Hydrogen Dioxide for Trichorrhæxis Nodosa Barbæ.—A planter of Delhi for ten years had been annoyed by nodular trichorrhæxis of his beard, for which various methods had been unsuccessfully employed. Dr. Zellweger, of Sumatra (*La Semaine médicale*, December 6, 1905), suggested the use of hydrogen dioxide (3 per cent. solution). From the first application the hairs became less friable, and the improvement continued until the hair became absolutely normal at the end of three months.

The Administration of Mercury by the Rectum.—Charles Audry (*Annales de dermatologie et de syphilis*, October, 1905) reports the results of clinical experiments to determine the feasibility of introducing mercury into the body through the rectum for therapeutical purposes. After using solutions of corrosive sublimate and of biniodide of mercury (which were rejected because they caused diarrhœa and tenesmus), he resorted to suppositories containing gray oil, representing 0.02 to 0.04 gramme, or $\frac{1}{3}$ to $\frac{2}{3}$ grain, of the metal in each. He found these to be well tolerated by the bowel. That the mercury was absorbed by the mucous membrane was shown by the fact that in the course of five days after commencing the treatment, the metal could be recovered from the urine. He, therefore, recommends this method of administering mercury as very easy to put into practice and physiologically efficacious. (The use of suppositories of blue ointment was approved thirty years ago by Professor G. D. Gross, who taught his classes that this was the most expeditious and certain way to induce pytalism.)

Subcutaneous Injections of Isotonic Sea Water in Athrepsia and Similar Conditions in Infants.—Professor Potocki and Dr. René Quinton (*Gazette des hôpitaux civils et militaires*, November 30, 1905) attribute special therapeutical properties to fresh sea water, to which sufficient pure spring water is added to bring it to the isotonic state, and which is then sterilized without heat by passing through a Chamberland filter. Care is taken to obtain it free from impurities by collecting it when the water has a depth of ten metres at some distance from shore. It is kept from contact of metal or of rubber, and is to be used in fifteen days or three weeks after collection. Emphasis is laid

upon the method of collection, preparation, and use as the physiological properties of sea water are destroyed by ordinary methods of sterilization and handling. Neglect of the above precautions has led to failure. The clinical notes are communicated of six cases of infants with jaundice, marasmus, and inanition (athrepsia), who had been unsuccessfully treated by the usual resources, and then received a number of injections, subcutaneously, of one ounce (30 c.c.) or more of isotonic sea water. This was increased in some to 50 c.c., and the injections were given once a day, or every second day, for a period of time lasting from a few days to several weeks. The good effects observed, which were obtained without change of diet, were cessation of vomiting and diarrhœa, prompt amelioration of general condition and steady gain in weight. The improvement in nutrition was especially marked and the condition of athrepsia rapidly passed away. In the grave cases of infantile icterus this treatment gave very good results. The reporters are positive that the ordinary normal salt solution is not a proper substitute for the fresh isotonic sea water which they used in these cases.

Successful Results of Antituberculous Vaccination in Cattle.—Under the official direction of the minister of agriculture, an examination was made December 2 and 3, 1905, at Melun, France, of forty calves, twenty of which one year previously had been subjected to inoculations with Behring's tubercular vaccine (*La Presse médicale*, December 6, 1905). Each of these had received two injections (with twelve weeks' interval between them) in the jugular vein of four milligrammes for the first injection, the second being twenty milligrammes of a culture made from dried human tubercle bacilli, which had been kept (without reinforcement) for seven years in the laboratory of Professor von Behring. The experiments were conducted by Professor Vallée, who, in order to make the vaccine more homogenous and manageable, added to it a solution (emulsion) of carbonated sodium chloride. This, however, it was claimed, had no effect upon the virulence of the product. One of the vaccinated animals had died from an accident during the year, but without presenting any signs of tuberculosis at the autopsy. The remainder were in perfect health at the termination of the year, and did not manifest any clinical signs of tuberculosis after having been exposed to diverse causes of infection. Three months after the last injection had been made the tests began. Some were placed in a stable in which tuberculous cattle were kept; others received an intravenous injection of a virulent culture, and this was given hypodermically to others. The control animals, which were subjected to the same treatment, all became infected, and many died, others showed extensive and deep tuberculous lesions. In contrast to this all of the vaccinated animals appeared to be immune, and the injection of tuberculine in four animals vaccinated subcutaneously, and in six vaccinated by injection into the vein, did not give any reaction. Clinically, therefore, all of the vaccinated heifers were found to be protected. The entire group was killed and subjected to careful autopsy. Although

all of the control animals showed well defined lesions of caseation and generalized tuberculosis, not one of the vaccinated animals (inoculated either subcutaneously or by the vein) had pulmonary tuberculosis. One animal vaccinated under the skin had local tuberculosis with liquefaction of a prescapular ganglion. But there was no extension of the disease to the other organs, the toxine being prevented from diffusing by the immunity conferred by the vaccination. One other animal which had been vaccinated by intravenous injection showed slight lesions of the mediastinal ganglia. These lesions coexisted with signs of right sided chronic pneumonia, and would have probably escaped observation in an abattoir. The pulmonary condition was attributed to a former attack of infectious pneumonia; it was not tuberculous. The contrast between the conditions found in the vaccinated and the control animals is regarded as affording indisputable proof of the value of this vaccine. Moreover, the conditions of the tests were more severe than would be likely to be met with in ordinary practice. It is, therefore, hoped that the vaccination of the bovine race against tuberculosis may now be regarded as at length established on a scientific and practical basis.

Treatment of Asiatic Cholera with Strychnine and Atropine in the Algid Stage, But No Alcohol.—The scientific treatment of cholera is comprehensively considered in a contribution to the *Indian Medical Gazette* (November, 1905) by P. W. O'Gorman, Major I. M. S., entitled *How to Cure Cholera*. In view of the fact that this disease is now prevailing in epidemic form in Madras and other places in India, and as there is a possibility of an early invasion of Europe through Russia and Germany, the subject is of present interest. The treatment must correspond to the stage of the disease, and it differs radically in the stage of collapse from that of the preceding diarrhoeal stage, or that of the following stage of reaction. During the early period the first indication is to eliminate the poison. If the bowels have not been completely emptied already, a saline may be administered, preferably the sulphate of magnesium and particularly the effervescent preparation in one or two teaspoonful doses, given in hot water. As free purgation might cause collapse, the saline should not be used in too large a dose and must be omitted if the bowels are acting freely and are practically empty. As a routine practice in every case and during any stage of the disease, Major O'Gorman recommends that the treatment shall begin with a single dose of calomel 0.2 to 0.4 grammes (3 to 6 grains) combined with double the quantity of sodium bicarbonate, the powder to be placed dry upon the tongue and washed down with very little water. If rejected by vomiting, the dose is repeated until it is retained. Calomel in these cases causes a flow of bile, acts as an intestinal antiseptic and a germicide; it is sedative to the vomiting and is antiphlogistic, as well as aperient and eliminative, and it is also diuretic. When the stools resume their bilious character the patient is likely to be recovering; but efforts should not be relaxed. To ensure microbicide action,

O'Gorman also gives the sulphocarbolates (zinc, 2 grains; sodium, 2 grains; and calcium, 3 grains) in peppermint or cinnamon water, every one or two hours. They rapidly check fermentation and probably are antagonistic to toxins, and deodorize offensive excreta. Not less than 30 to 60 grains must be given the first day, decreasing afterwards. The test of their operating is the deodorizing of the stools. It is important to stop all foods absolutely at this stage of the disease. Moderately cold water may be used freely as a drink, but excessively cold water or ice does harm. Aerated water may be permitted. Care should be taken to prevent the onset of collapse by confining the patient to warm bed and applying sinapisms or turpentine fomentations to the abdomen with a view to arrest vomiting, purgation and cramps and to stimulate the circulation. Carminatives, sedatives, and astringents, such as chlorodyne, pills of camphor, capsicum morphine, and asafoetida are cautiously used as required. Nuclein is a valuable agent, as it increases the bactericidal properties of the blood by stimulating leucocytosis. In the treatment of the collapse stage reliance is placed in atropine sulphate or hyoscyamine in small frequently repeated doses, given hypodermically and preceded in sudden and dangerous syncope by nitroglycerin (0.004 grain) by the mouth. Strychnine is used in full doses (0.05 grain) every half hour in collapse. In children brucine is substituted, given by the mouth ($\frac{1}{184}$ grain every quarter of an hour for three or four doses) until effect. Caffeine is also valuable as a general stimulant and heat raiser. The use of alcohol is absolutely condemned because it is not a stimulant, but a depressant. It is declared to be "not an antagonist of collapse, but a collapse producer." It exercises a parietic influence on the vasomotor system, causing lowering of temperature, and leads to venous engorgement of the abdominal organs. Its administration in cholera is declared to be a "fatal procedure." The application of hot blankets, bottles or bricks, sinapisms, and frictions with capsicum mixed with flour, are useful. Also subcutaneous injections of hot normal salt solution, or the same *per enema* are recommended. Infants may have hot immersion baths. This treatment should be continued until reaction is fully established, and the strychnine then given at reduced intervals until all danger has passed. Intestinal antiseptics are continued until convalescence. Bilious character of discharges is maintained by doses of calomel or magnesium sulphate. If there is suppression of urine no attention is paid to it until the second day, when counterstimulation may be applied to the loins. Small doses (0.1 grain) of pilocarpine may be given if uræmia is threatened, and if the heart is weak, this is combined with strychnine (0.05 to 0.1 grain). Hot coffee, kola, or tea may be administered, or caffeine (1 grain) given by the mouth every half hour until effect is obtained. Digitalin may be combined with the caffeine. The diet should be carefully supervised and the return to solid food should not be permitted until a week or a fortnight after convalescence. The food should be nourishing, but very bland, given every two or three hours.

NEW YORK MEDICAL JOURNAL.

INCORPORATING THE

Philadelphia Medical Journal
and The Medical News.*A Weekly Review of Medicine.*

Edited by

FRANK P. FOSTER, M. D.,
and SMITH ELY JELLIFFE, M. D.

ASSISTANT EDITORS:

NICHOLAS SENN, M. D.,	- - -	Chicago.
FREDERICK C. SHATTUCK, M. D.,	- - -	Boston.
JAMES M. ANDERS, M. D.,	- - -	Philadelphia.
JEFFERSON R. KEAN, M. D.,	- - -	United States Army.
RUDOLPH MATAS, M. D.,	- - -	New Orleans.

ASSISTANT EDITORS:

REED B. GRANGER, M. D.
FREDERICK T. HANEMAN, M. D.
JOHN M. SWAN, M. D., Philadelphia.

Address all business communications to

A. R. ELLIOTT PUBLISHING COMPANY,

Publishers,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, JANUARY 6, 1906.

OUR ADVISORY STAFF.

The natural growth of the *New York Medical Journal*, coupled with the augmentation consequent, first, on the incorporation of the *Philadelphia Medical Journal* and, second, on that of the *Medical News*, has led to such an increase of responsibility that it has become more frequent than ever for us to feel the desirability of obtaining advice as to matters affecting the conduct of the journal. It has been thought wise, therefore, to secure the co-operation of a number of leading members of the profession in various parts of the country.

We count ourselves peculiarly fortunate in having been able to form an advisory editorial staff consisting of such men as those whose names appear at the head of the first editorial column—Dr. Nicholas Senn, of Chicago, Dr. Frederick C. Shattuck, of Boston, Dr. James M. Anders, of Philadelphia, Dr. Jefferson R. Kean, of the United States Army, and Dr. Rudolph Matas, of New Orleans—all of more than national reputation and all actively engaged in the teaching of medicine. And it is not in an advisory capacity solely that these gentlemen have consented to take part in the affairs of the journal; they will from time to time contribute editorial articles that are certain to be of peculiar value. Whenever it seems necessary, we shall take

measures to enlarge the list of these collaborators, always keeping in mind the principle of selecting them from among the most representative men in various sections of the country. We believe that by this policy we can most effectually maintain the journal as an exponent of all that is best in medicine.

TYPHOID FEVER AS A SCOURGE OF ARMIES.

So much of professional thought and inquiry has of late years been given to the problem of the prevention of typhoid fever, especially in military circles, that it is now hardly to be expected of any man that he shall contribute to our understanding of the subject anything conspicuously original. Nevertheless, a real service is performed when there is presented to us such a graphic and telling picture of the possibilities of preventive medicine in the matter of an eminently preventable disease as is to be found in Major Jefferson Randolph Kean's essay on *The Prevention of Disease in the Army and the Best Method of Accomplishing that Result*, being the Seaman Prize Essay of the Military Service Institution, published in the January number of the *Journal of the Association of Military Surgeons of the United States*. Of course Dr. Kean does not confine himself to typhoid fever, but that disease is so overwhelmingly prominent among the causes of death and disability in our army in time of war that its consideration naturally takes the foremost place in military sanitation, and so it does in Dr. Kean's essay.

In his recommendations Dr. Kean has no Utopia in mind, as is shown in the following passage: "For the beautiful dream of a truly sanitary army, in which the bacteriologist marches on the skirmish line, and the exhausted soldier waits by the well curb for laboratory reports before quenching his thirst, is impossible from the scientific as well as the military point of view." But he has, nevertheless, a thoroughly realizing sense of the absolute necessity of a constant fight against the typhoid bacillus as the price of reasonable immunity against its ravages. An important point in such a fight, so far as armies are concerned, is, as pointed out by Dr. Kean, the education of line officers, as well as such officers of subsistence as the medical officer has to rely on more or less, in the necessity of thorough and constant sanitation. Among specific measures, though a moving force is not very liable to serious outbreaks of the disease, save as it may be imported with recruits from civil life, a camp should be treated like a permanent camp when it is occupied for so long a period as two weeks, and the situation of the tents should be changed at regu-

lar and comparatively short intervals, so as to expose the contaminated ground occupied by them to the purifying action of direct sunlight. Shifting them back and forth between two adjacent lines will probably be found to be sufficient. Another point of the highest importance is to stop the practice of promiscuous urination on the ground. This is difficult to accomplish, particularly at night, but much may be done toward it by providing tubs at convenient points.

INFANTILE MONGOLISM.

The curious and uncommon form of idiocy known as Mongolism has been studied principally by the French, though attention seems to have been first called to it by an English observer, Langdon Down, in 1866. Its chief interest, apart from what attaches to its queer manifestations, appears to lie in the necessity of distinguishing it from myxœdematous idiocy, with which it has doubtless often been confounded. It is true that it is frequently, perhaps almost always, accompanied by phenomena attributable to defective thyroid function, but these manifestations, together with so much of the idiocy as may be of thyroid origin, are susceptible of amelioration by thyroid medication, whereas the Mongol part of the idiocy is not remediable by any means at present known. These and other facts relating to the condition were well brought out recently on the occasion of Dr. J. Comby's presenting at a meeting of the Medical Society of the Paris Hospitals a child affected with this form of arrested development (*Bulletins et mémoires de la Société médicale des hôpitaux de Paris*, December 14th).

The defect is, of course, always congenital, and (for a wonder) nobody seems to have imputed it to neuropathic, alcoholic, or syphilitic heredity, though several observers agree that in the great majority of instances the mother, while pregnant with the child, had been subjected to very trying experiences, particularly during the latter portion of the pregnancy. The children have quite the appearance of Chinese babies, even to a yellow hue of the skin and to obliquity of the palpebral opening. They are the subjects of incomplete development of the cerebral convolutions as the essential feature, but this is exceedingly apt to be associated with other developmental defects, such as patency of the foramen ovale, undescended testicles, and club foot. They are very frail, falling an easy prey to bronchopneumonia or some other acute pulmonary affection, and hardly ever live to adult age. The idiocy is persistent, but does not appear to be progressive. Those who live to grow up are equal to the de-

mands of some simple mechanical occupation, especially gardening, but beyond this their minds do not bear taxing. A singular redeeming feature of their idiocy is their invariable love of music, with an accompanying unusual capability of remembering tunes. In some instances, too, they show a fondness for dancing. The prenatal development of Mongolian characteristics in these idiots must be called mysterious for the present, but its further study may throw some important light on the causes that differentiate the races of mankind.

ON TESTING FOR BILE IN THE URINE.

Gmelin's test is often unsatisfactory, as many specimens of urine which contain bile fail to give a clear reaction with nitric acid containing nitrous acid. In 1904 E. Riegler (*Zentralblatt für innere Medizin*, April 15, 1905) described a test which he alleges is more delicate than Gmelin's and surer in its results. The reaction depends upon the capability of the paradiazobenzenes to color an alcohol-chloroform solution of bile pigment intensely red. Two solutions are prepared: 1. Five grammes of paranitroamidobenzene are dissolved in 180 c.cm. of distilled water, and, while the solution is gently shaken, twenty-five c.cm. of pure sulphuric acid are added. 2. A solution of two and a half grammes of sodium nitrate in 200 c.cm. of distilled water. Four or five c.cm. of chloroform are placed in a test tube and the tube is then filled with filtered urine. The two fluids are then thoroughly mixed, and after the chloroform has settled to the bottom of the test tube the urine is decanted cautiously. A small quantity of 96 per cent. alcohol is then poured over the chloroform extract, and five or six drops each of solution 1 and solution 2 are added, and the test tube is shaken thoroughly. If biliary coloring matter is contained in the urine, the chloroform, which settles to the bottom of the tube, will be colored orange or red.

H. Schildbach (*Zentralblatt für innere Medizin*, November 11, 1905) has tested a number of urines for bile, using Riegler's test, and found that only urine which contains bile or biliary coloring matter gives a positive reaction; urine which contains large quantities of indican or of urobilin does not give the reaction. He compared the delicacy of Riegler's test with that of Huppert's by making solutions of known strengths of bilirubin in urine. He found that in a solution of one part of bilirubin to 300,000 of urine, Huppert's reaction was positive and Riegler's weakly positive. In a 1 to 400,000 solution Huppert's reaction was positive and Riegler's very weakly

positive. In solutions of one part of bilirubin to 500,000 of urine both tests gave negative results. Von Jaksch (*Clinical Diagnosis*) considers Huppert's method for the detection of bile in the urine the most satisfactory of all. Eight to ten c.cm. of urine are treated with milk of lime, and the resulting precipitate is filtered off and washed into a beaker with alcohol containing sulphuric acid. More sulphuric acid is added to insure an acid reaction. The liquid, with the precipitate suspended in it, is then boiled. The precipitate will be decolorized, and, if bile pigment is present, the liquid will assume a green tint.

The furfural test for the presence of bile in the urine is quite satisfactory for clinical purposes and is easy of application. To a few c.cm. of filtered urine, contained in a test tube, add two or three drops of a solution of ten drops of furfural in four ounces of distilled water. Place the thumb over the mouth of the tube and shake so as to produce a thick foam. If strong sulphuric acid is now added to the foam, the presence of bile will be indicated by a pink tint of the foam where the acid runs through it. Urine that does not contain bile gives either no color or a dirty yellow shade.

CALCIUM CHLORIDE AS A PREVENTIVE OF HÆMORRHAGE.

In some cases of anæmia, jaundice, and other conditions attended by a decreased power of coagulation of the blood the danger of a surgical operation may be greatly increased by the possibility of severe hæmorrhage. In some instances this danger is recognized beforehand, while in others it is unsuspected. A very practical suggestion is made by Mr. F. Percival Mackie, of the British Indian Medical Service (*Indian Medical Gazette*, November), as to the means of detecting this condition and a method of overcoming it. It is customary with careful surgeons to have a blood count made as a routine matter previous to all major operations, for its indications with regard to diagnosis and prognosis. The blood is usually obtained by pricking the lobe of the ear with a needle, which causes a few drops of blood to flow. In some cases, however, particularly in anæmias and jaundice, the blood may continue to ooze for several minutes. Mr. Mackie considers it a warrantable inference that in such cases very free capillary oozing would be likely to occur during a surgical operation.

In the absence of more exact methods of determining the coagulating power of the blood, this method may have no little value. In point of fact, it was turned to account in a case of large parotid tumor which Mackie intended to remove. At the preliminary blood examination it was noted that

the blood flowed freely from the prick made by the needle. Upon this evidence of lack of coagulation power, calcium chloride was administered for two days preceding the operation, in doses of thirty grains, of which five doses in all were given. When the operation was done, which, in the removal of a large endothelial parotid growth, required extensive and deliberate dissection, it was observed that there was hardly any bleeding. Possibly this application of the well established action of calcium chloride in enhancing the coagulating power of the blood may prove a valuable resource and improve the chances of recovery in some cases that at present are regarded as "almost the despair of surgery."

APPENDICULAR INFLAMMATION IN YOUNG WOMEN.

The close anatomical relation between the vermiform appendix and the right ovary and oviduct is accountable for the fact that the diagnosis between inflammatory diseases of those organs is difficult. It is undoubtedly true that many cases which have been diagnosticated as appendicular have been shown on the operating table to be cases of disease of the annexa, and *vice versa*. Although it is not so stated in many textbooks, the most common position for the appendix is that in which it points over the brim into the pelvis, its tip, in the female, lying upon or being adherent to the broad ligament. In women in whom the chance for infection is large, the proper interpretation of a case presenting right iliac fossa symptoms is often most puzzling. In the virgin this problem ought not to be so difficult, symptoms in this region in such an individual being more probably appendicular than annexal.

Dr. J. W. Dunbar Hooper (*Intercolonial Medical Journal of Australasia*, October) calls attention to this problem. In the last five years he has seen in private practice sixty cases of inflammation of the appendix in women, of which forty were clearly associated with or mistaken for disease of the reproductive organs. Of the forty cases, thirty-one occurred in women under thirty years of age. For sixteen years he had all the boys at the Scotch College, East Melbourne, under observation, and during that period he saw only two cases of appendicular inflammation. On the other hand, in five years during which he was the medical officer to a large public girls' school he saw seven cases of such disease, and during the same period he saw in private practice eleven cases which were supposed to be purely gynecological in nature, eight of which were cases of appendicular trouble associated with right annexal disease. He believes that acute and chronic

appendicular inflammation occur more frequently in young girls than has hitherto been supposed, and that errors in diagnosis are partly responsible for the opinion that it is less common in women than in men.

TEAK WOOD AS A CUTANEOUS IRRITANT.

In the December number of the *British Journal of Dermatology* Dr. Willmott Evans, surgeon to the Skin Department of the Royal Free Hospital, London, records a case of dermatitis apparently caused by working in teak. Teak dermatitis does not seem to have been unheard of before, though it must have been observed but rarely, for the only references to it that Dr. Evans has been able to find in literature consist of a query published in the *Lancet* for April 18, 1896, and two brief replies by correspondents in subsequent numbers of that journal.

The author of the query in the *Lancet* asks if anybody can inform him whether "carpenters working in teak occasionally suffer from a skin affection similar to that described as resulting from handling *Primula obconica* and affecting the face and arms." There were two replies to this query. In one of them the querist was assured, on the authority of a man with thirty years' experience at working in teak, that such a thing had never been heard of, but it was added that, if splinters of teak pierced the skin, the wound was sure to inflame and suppurate. The other correspondent went further, saying that wounds from teak splinters healed quite readily and without inflammation or suppuration.

Dr. Evans's case was that of a carpenter who had so often suffered severely from working in teak that for ten years he had declined to work in that wood, but advancing age, with consequent impaired ability to obtain employment, had recently induced him to undertake some staircase work in teak. Now, in stair treads, Dr. Evans states, it is chiefly the heart wood of teak that is employed, and this part of the wood has an aromatic odor due to an essential oil which in India is used medicinally. He thinks it probable that this oil is the cause of teak dermatitis, and he suggests that it would be interesting to know if the medicinal application of it has ever been known to give rise to cutaneous inflammation. In his own case the dermatitis had begun on the backs of the hands, whence it had spread up the forearms and arms to the chest and face, and then to the rest of the trunk and to the lower limbs. Wherever it was of moderate severity there was only erythema, but where it was severest there

were vesicles or their remains, together with numerous fissures and excoriations produced by scratching. It yielded in ten days to applications of a lead lotion and calamine.

It will be seen that this affection bears no little resemblance to the dermatitis occasioned by rhus poisoning, which, indeed, Dr. Evans regards as also due to an essential oil, rhodendrol. It is known that many persons are insusceptible to rhus poisoning, and perhaps it is by virtue of an idiosyncrasy that some workmen in teak are prone to contract dermatitis. We presume that teak is not so much used in the United States as it is in England, but it may at any time come into extensive use, and it is therefore well to be aware of its occasional poisonous action. Teak is or was a favorite material for ships' decks, and it would be interesting to know if barefooted sailors have suffered from contact with it.

AN IDIOSYNCRASY IN REGARD TO EGGS.

Doubtless there are persons with whom eggs are difficult of digestion, but possibly M. Linossier indulged in a little exaggeration when, at a recent meeting of the Paris Society of Biology (*Semaine médicale*, December 6th), he declared that there were certain individuals to whom fresh hen's eggs were poisonous. Poisonous is a strong word to apply to articles of food capable of giving rise to digestive derangement, and such disturbance was all that Linossier attributed to the alleged toxic action of eggs, though he did cite Brocq as authority for the statement that white of egg was capable of provoking urticaria. There is hardly any ordinary article of food which, wholesome as it may be for most persons, is not provocative of digestive disturbance with exceptional persons. Were we to class as poisons all articles that have that effect, there would be little left that could be looked upon as invariably nonpoisonous. But it is nothing worse than hyperbole to say that what is one man's meat is another man's poison.

AN AMBULANCE SERVICE FOR LONDON.

It seems certain that London is soon to have an ambulance service, the wagons all probably of the horseless kind, under the control of the County Council. The area proposed for the operation of the service is rather restricted, being limited to the section in which accidents are most apt to occur, but doubtless additional ground will be covered when the people commence to realize the benefit of the system.

Critical Reviews.

THE SURGICAL TREATMENT OF MENSTRUAL DISORDERS.

By HENRY C. COE, M. D.,

NEW YORK.

To those who are familiar with the changes which have taken place in gynæcology during the past quarter of a century they appear as eccentric as the variations of an atypical pulse tracing. It would be interesting to follow these changes from the purely "medical" stage to the surgical, then to the radical, farther still to the conservative, and onward to the present position of the specialty when theories have given way to facts. The criticism which has been frequently made that this is an outworn theme is not true. While operative technics have been so improved that there would seem at present to be little room for essential changes, to the thoughtful observer there is ample opportunity for scientific research and its practical application among subjects that are apparently most trite and familiar.

Dysmenorrhœa and variations from the normal menstrual flow though, to all intents, they are elucidated in every textbook, are phenomena which have recently attracted the attention of scientific observers, as well as clinicians. Surgeons have long been impressed with the fact that the operative treatment of these symptoms is often exceedingly unsatisfactory, the results being either *nil*, or even injurious.

The sharp curette, properly described as one of the most useful, and at the same time the most dangerous, instruments in the armamentarium, has become so familiar to the general practitioner that he is too apt to employ it at the slightest provocation, without weighing sufficiently the indications and contraindications. In dysmenorrhœa without demonstrable pelvic lesions, in so called functional amenorrhœa, in menorrhagia and metrorrhagia of obscure origin, divulsion and curettement have become the routine treatment, without regard to the possibility of the condition being due to general, rather than to local causes.

This is distinctly a step backward in gynæcological surgery, as would be the general resort to explorative laparotomy as a purely empirical measure in doubtful cases of pelvic pain. While the opinion that dysmenorrhœa of uterine origin is purely of the so called "obstructive" type, and that menorrhagia is always due to neoplasms or hyperplasia of the endometrium, has long been rejected by intelligent observers, it is a curious evidence of inconsistency that surgeons should still adhere to a method of treatment based upon these obsolete views.

Neurotic women, both single and married, who present all the general as well as local disturbances common to this type of patients, are subjected to operations which either do not relieve their symptoms or even aggravate them. Instead of regarding their various reflex pains as merely local manifestations of a general nervous state, the "advanced" surgeon divulses and cures, removes "suspicious" ovaries and ap-

pendices, and congratulates himself that he has found and removed the cause of the obscure phenomena. A few patients may be cured, many are temporarily relieved, but a larger number drift into the hands of other specialists and may remain in the same condition as before unless some intelligent practitioner recognizes the fact that their symptoms are not due to organic lesions, but are purely neurotic.

There is one hopeful sign that gynæcology may yet be placed upon a sound scientific basis, and may cease to be synonymous with surgery. This is the fact that careful studies of the phenomenon, dysmenorrhœa, by such candid observers as Theilhaber, Menge, Olshausen, and others have demonstrated the fact that menstrual pains are in a considerable number of cases not due to disease of the uterus or ovaries, but simply to the exaggeration of a physiological state in neurotic subjects.

It is well known that during menstruation there are constant rhythmical contractions of the uterine muscle, which are not noticed by healthy women. In a neurotic or hysterical subject, the uterus being anatomically normal, these same contractions may become so excessive as to give rise to more or less severe pains, which are most marked if they assume the form of tetanic contraction of the sphincter at the os internum. Uterine colic is not due, as is generally supposed, to the passage of clots, since in many typical cases only fluid blood escapes from the uterus; moreover, the pains are most severe from twelve to twenty-four hours before the flow appears, instead of on the second or third day, when most clots are passed (Theilhaber, *Zentralblatt für Gynäkologie*, No. 3, 1902). Doubtless the premenstrual engorgement of the normal endometrium and the presence of blood as a foreign body within the uterus are factors, as suggested by Fritsch.

Enough has been said to show the fallacy of the reasoning by which a surgeon infers that because he finds a slightly anteflexed, but otherwise healthy uterus, therefore the dysmenorrhœa is directly due to obstruction of the flow, or endometritis, and that curettement is clearly indicated. The same objection to this routine method of treatment holds in many cases of menorrhagia, in which the result of the operation as regards both the absence of any evidence of an abnormal condition of the endometrium and its failure to relieve the symptoms, prove that the ultimate cause of the hæmorrhage is beyond the reach of the surgeon. Who has not met with obstinate cases of menorrhagia in unmarried women which resisted both medicinal and surgical treatment?

The theory of persistent uterine contractions during menstruation explains this phenomenon also. In a flabby subject, with general muscular atony, it is quite reasonable to infer that the diminution, or absence, of the normal contractions prevents closure of the bloodvessels, as in postpartum hæmorrhage. Doubtless endarteritis, venous obstruction of visceral origin, etc., account for some of the cases which have been described as "hæmorrhagic endometritis," and have been treated by such radical procedures as vapocauterization and even hysterectomy.

We shall not dwell upon this topic, as it is our purpose merely to emphasize the fact that while the curette is invaluable as an aid to diagnosis in these obscure cases, the evidence which it furnishes is often negative, and that the operation itself is not curative because it is performed for the relief of a supposed local trouble, when the menorrhagia is really due to general muscular atony.

We need not touch upon the accidents and unpleasant after effects of divulsion and curettement, which have been often noted by every gynecologist. Aside from perforation of the uterine wall, permanent amenorrhœa sometimes follows even a judicious use of the curette—a phenomenon that has never been satisfactorily explained. Whether the endometrium fails to become renewed, or undergoes atrophy after its regeneration, has not been demonstrated anatomically. It is hard to conceive the possibility of complete destruction of the utricular glands by the most vigorous use of the instrument. Patients who suffer from scanty and painful menstruation, with small, undeveloped uteri, would seem to be most liable to this unfortunate result. But it is exactly in such cases, and even in those of complete amenorrhœa (from atrophy or non-development of the uterus or ovaries) that the general practitioner frequently uses the curette to "cure" sterility. As a rule, the results are negative or worse.

The reaction against the wholesale extirpation of normal or slightly cystic ovaries which occurred many years ago was succeeded by a general resort to "conservative" surgery, which though a long step in advance, was itself carried to extremes. The same ovaries which were formerly removed were punctured, burned, resected, and otherwise tampered with when (as we now know) they had better been let alone. Dysmenorrhœa and menorrhagia have often been attributed to the presence of slight ovarian disease, and the abdomen has been opened with the purpose of removing it. The result has often been gratifying, but as our experience with conservative surgery of the ovaries increases we are obliged to admit that not only do we often fail to relieve the symptoms, but that the pains and menorrhagia are aggravated after the operation. Moreover, in a considerable number of cases the remaining portions of the resected ovaries atrophy, causing amenorrhœa, or undergo cystic degeneration, increasing instead of relieving, the preexisting troubles.

The interesting subject of intermenstrual pain has been carefully studied, most recently by Rosner (*La Gynécologie*, June, 1905), who, after reviewing the various theories that have been advanced, concludes that this phenomenon is really a pelvic neuralgia, without demonstrable lesions, most common in arthritic subjects, due to some abnormal action of the ovaries.

Van de Velde (*Zentralblatt für Gynäkologie*, No. 30, 1905) further elucidates this subject by his observations on the periodical variations in the menstrual blood pressure, which he believes are due to some chemical irritation proceeding from the ovaries. He shows that the uterus is dis-

tinctly enlarged at the time when the intermenstrual pain is marked.

We have referred to this subject because it was formerly held (and some observers still claim) that this symptom is always associated with cystic disease of the ovaries, and therefore was an indication for operation. It is interesting to note that the expression ovarian, or pelvic, "neuralgia" which we once held in derision is resuming its place even in scientific monographs.

In this brief résumé of a most fruitful theme we have been obliged to omit many interesting points which are still under discussion. Our aim has been simply to emphasize a fact which has long been the opinion of those who seek to read the signs of the times—that there is a distinct reaction against gynecology as a purely surgical specialty, and a tendency on the part of thoughtful observers to recognize general causes of local symptoms and to direct their treatment accordingly.

News Items.

NEW YORK CITY AND STATE

The Section in Surgery of the New York Academy of Medicine held a meeting on Friday evening, January 5th, the paper of the evening being A Case of Right Subclavian Aneurysm, by Dr. Howard Lilienthal.

Seton Hospital.—There is at present a vacancy on the resident staff of this hospital. The term of service is one year with salary. For particulars apply to Dr. T. Stuart Hart, 130 West Fifty-ninth Street, New York.

Glens Falls Medical and Surgical Society held its regular meeting on the evening of Thursday, January 4th. The paper of the evening was read by Dr. J. T. Park, on the subject of Chorea.

The Society of Medical Jurisprudence will hold its next meeting on Monday evening, January 8th. The presidential address will be delivered by Dr. Carl Beck on the subject of The Modern Treatment of Fractures. It is expected that the subject will be discussed by Dr. Robert Abbé, Dr. Robert T. Morris, Dr. Alexander B. Johnson, and others.

Coroners' Physicians in Albany County.—The Albany County board of supervisors, on December 20, 1905, re-elected Dr. William E. Silcocks, of Green Island; Dr. Alvah H. Traver, of Albany; Dr. Charles L. Witbeck, of Cohoes; and Dr. James F. Rooney, of Albany, as coroners' physicians.

The Alumnae Association of the New York Medical College and Hospital for Women.—The following was the programme for a meeting held on January 3, 1906: Report of the delegates to the State Federation of Women's Clubs; a paper on Dystociaclical Excerpts, by Dr. Hattie Van B. Peckham.

Charitable Bequests.—By the will of Julia A. Stebbins, the Rochester (N. Y.) City Hospital will receive \$2,000, and the Oswego (N. Y.) City Hospital will receive \$300.

By the will of John Weed, the Stamford Hospital, of Stamford, Conn., will receive \$50,000 for a fund to be known as "The John Weed Memorial Fund."

The Section in Otology of the New York Academy of Medicine will hold a meeting on Thursday evening, January 11th. Dr. W. P. Eagleton will read a paper entitled Some Considerations on the Circulatory Disturbances the Result of Ligation of the Internal Jugular Vein in a Case of Sinus Thrombosis.

The Section in Paediatrics of the New York Academy of Medicine will hold a meeting on the evening of Thursday, January 11th. The following papers are to be presented: The Diagnosis and Treatment of Polyarticular Diseases in Children, by Dr. P. William Nathan; The Fat Problem and Goats' Milk in Infant Feeding, by Dr. J. Finlay Bell.

New York Post Graduate Hospital.—A remarkable increase in the work of this hospital is shown in the annual report for 1905. During the year 3,507 patients were treated; the number of patients occupying free beds was

2,819; number of free days of hospital care, 43,256; number of free patients treated in the dispensary, 21,519; number of free visits by patients at dispensary, 95,142.

The New York Academy of Medicine.—At the annual meeting held in Hosack Hall, on Thursday evening, January 4th, the following papers were presented: Some Recent Advances in Cardiac Pathology, by Dr. C. N. B. Camac; Treatment of Chronic Diseases of the Heart by the Nauheim Methods; Its Indications and Contraindications, by Dr. Francis P. Kinnicutt.

Ontario County Medical Society.—The quarterly meeting of the society will be held in Canandaigua, N. Y., on Tuesday, January, 9th. The following programme has been arranged: Papers, Gallstones, by Dr. W. W. Skinner; A Talk on Laboratory Methods, by Dr. Emma C. Clark; A Report on Eight Recent Cases of Cancer Occurring in One Locality.

American Dermatological Association.—At the twenty-ninth annual meeting of this association, held in New York on December 28, 29, and 30, 1905, the following officers were elected for the ensuing year: President, Dr. M. B. Hartzell, of Philadelphia; vice-president, Dr. Thomas C. Gilchrist, of Baltimore; secretary and treasurer, Dr. Grover W. Wende, of Buffalo. The next meeting of the association will be held in Cleveland in May, 1906.

The New York State Association for Promoting the Interests of the Blind.—The first public meeting of this association will be held in New York on Thursday, March 29th, at which Mr. Clemens (Mark Twain) will preside and the Hon. Joseph H. Choate and Miss Helen Keller will speak. The association was formed to extend the efficiency of the service which is already being done for the blind, and to help them in the best ways to help themselves. Money is needed to start the work, and an appeal for funds has been sent out by the treasurer, Miss Winifred Holt, 44 East Seventy-eighth Street, New York.

The Medical Society of the County of Clinton.—The annual meeting of this society will be held in the Court House, Plattsburgh, N. Y., on January 9, 1906, at 1:30 p. m. The following programme has been arranged: The annual address of the president, by Dr. G. D. Dare; Papers, Therapeutic Climatology, by Dr. Charles E. Woodruff, Major and Surgeon of the United States Army; A Case of Tuberculosis Apparently Cured, by Dr. W. C. Thompson; A Case of Aneurysm of the Descending Aorta, by Dr. R. S. Macdonald, of Dannemora State Hospital; The New Psychiatry, by Dr. R. H. Hutchings, Superintendent of the St. Lawrence State Hospital.

Yerkes Hospital.—Among the bequests of the late millionaire Charles T. Yerkes, who died at New York city on December 30, 1905, is also a paragraph which deals with the founding of a hospital to be known as the Yerkes Hospital. The sum of not more than \$800,000 is to be set aside for the purpose of purchasing a proper plot of ground in the borough of the Bronx, city of New York, and for the building of a hospital. He also provides for support and maintenance of the hospital, which will be open to all patients not financially capable to pay for their proper treatment. The amount will be available after the death of Mrs. Yerkes.

The Medical Association of Troy and Vicinity.—The annual meeting of the association was held on Tuesday, January 2, 1906. There was to be an election of officers and new members, and the following papers were to be presented: President's Address. Notes on Stokes-Adams Disease, by Dr. H. C. Gordinier; Head Injuries, by Dr. C. B. Herrick; The Flat Foot Series of Disabilities and Deformities of the Foot, by Dr. J. M. Berry; The Treatment of Bone Tuberculosis, by Dr. M. D. Dickinson; Diverticulitis, Causing Intestinal Obstruction in a Patient with Multiple Mesenteric (Acquired), Diverticulæ of the Ileum, by Dr. John A. Sampson.

Opposition to the Proposed New York City Sanatorium for Consumptives.—At a meeting, held on Wednesday, December 13, 1905, the medical society of the county of Richmond adopted a resolution condemning the plan to locate the new two million dollar tuberculosis hospital on Staten Island. The resolution adopted recited that the climate of Richmond County was detrimental to the successful treatment of tuberculosis, owing to the humidity and also the sharp variations of temperature. It was resolved that the proposed hospital would be detrimental to the best interests of the island. The Staten Island board of trade and transportation also met and passed a similar resolution.

The Medical Association of the Greater City of New York.—The annual meeting of this association will be held in the New York Academy of Medicine on the evening of Monday, January 8th. The following programme has been arranged: Symposium on Diseases of the Upper Air Passages, Recent Advances in Therapeutics, by Dr. W. Freudenthal; Hypertrophy of the Pharyngeal and Faucial Tonsils, by Dr. Frank C. Raynor; The Accessory Sinuses, by Dr. Hubert Arrowsmith; Indications for Treatment in Acute Diseases of the Accessory Sinuses, by Dr. Henry L. Swain; The Serum Treatment of Hay Fever, by Dr. Charles H. Knight. Discussion by Dr. John W. Gleitsmann, Dr. Francis J. Quinlan, Dr. Bryan de Forest Sheedy, Dr. H. Beaman Douglass, Dr. Lewis A. Coffin, and Dr. Lee M. Hurd.

The Eastern Medical Society of the City of New York.—At a meeting, held on December 8, 1905, the following officers were elected for the ensuing year: President, Dr. Charles Goodman; vice-presidents, Dr. Nicol Mandl and Dr. A. J. Ronginsky; recording secretary, Dr. Martin Cohen; corresponding secretary, Dr. I. S. Tunick; treasurer, Dr. M. M. Stark; trustees, Dr. E. K. Browd and Dr. L. J. Ladinsky. The next regular meeting of the society will be held on January 12, 1906. The following programme has been arranged for the meeting: (1) Demonstration of *Spirochæta Pallida*, by Dr. B. Lapowski; (2) Symposium on Surgical Diseases of the Kidney: (a) The Methods of Determining the Functional Capacity and Diagnosis of the Surgical Diseases of the Kidney, by Dr. A. A. Berg; (b) Renal Colic, by Dr. E. L. Keyes, Jr.; (c) Surgical Treatment of Chronic Nephritis, by Dr. Ramon Guiteras; (d) The Treatment of Commoner Forms of Surgical Diseases of the Kidney, by Dr. F. Tilden Brown; discussion by Dr. Willy Meyer, Dr. Howard Lilienthal, Dr. Joseph A. Blake, and others.

Society Meetings for the Coming Week:

MONDAY, January 8th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medicohistorical Society (private); New York Ophthalmological Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence, New York; Corning, N. Y., Medical Association (annual); Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

TUESDAY, January 9th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private) (election); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Association; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private) (election); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, January 10th.—Medical Society of the Borough of the Bronx, New York; New York Pathological Society (annual); New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox, Mass., Medical and Surgical Society (private).

THURSDAY, January 11th.—New York Academy of Medicine (Sections in Pædiatrics and Otolaryngology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society (annual and election); Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, January 12th.—New York Academy of Medicine (Section in Neurology); Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, January 13th.—Obstetrical Society of Boston (private).

PHILADELPHIA AND THE MIDDLE STATES

Change of Address.—Dr. James A. Babbitt, to 121 South Eighteenth Street, Philadelphia.

State Registrars of Vital Statistics.—Dr. Samuel G. Dixon announced the appointment of the registrars of vital statistics on December 23, 1905, in compliance with the new law which takes effect on January 1, 1906.

The Annual Meeting of the Medical Society of the University of Pennsylvania was held on December 13, 1905. The following officers were elected: President, Dr. David Riesman; vice-presidents, Dr. J. Dutton Steele and Dr. J. B. Carnett; secretary, Dr. J. M. Cruice.

Charitable Bequests.—By the will of Mary C. Rudack St. Vincent's Orphan Asylum receives \$5,000.

By the will of Mary A. Cooper the Methodist Home for the Aged receives \$1,000, the Methodist Hospital receives \$1,000, and the Methodist Orphanage receives \$500.

Personal.—Dr. C. R. Arnold, of Colorado Springs, Colo., is registered at the Philadelphia Polyclinic and College for Graduates in Medicine.

Dr. J. K. Shell has been elected director of physical training at Swarthmore College to succeed Dr. W. S. Cummings, who recently resigned.

Scientific Society Meetings in Philadelphia for the Week Ending January 13, 1906.—Monday, January 8th, Section in General Medicine, College of Physicians; Wills Hospital Ophthalmic Society. Tuesday, January 9th, Kensington Branch, Philadelphia County Medical Society; Philadelphia Pediatric Society; Botanical Section, Academy of Natural Sciences; Northwestern Medical Society. Wednesday, January 10th, Philadelphia County Medical Society. Thursday, January 11th, Pathological Society; Section Meeting, Franklin Institute. Friday, January 12th, Northern Medical Association; West Philadelphia Branch, Philadelphia County Medical Society.

The Pennsylvania State Board of Medical Examiners.—The report of the Pennsylvania State board of medical examiners of the examinations held in Philadelphia and Pittsburgh in June last shows that out of 460 candidates there were 56 who failed to pass. The candidates represented 38 colleges, including the Universities of Naples, Florence and Turin, the University of Italy, and the Western University of London, Ontario. There were 109 candidates from Jefferson Medical College, 81 from the Medico-Chirurgical College, 80 from the University of Pennsylvania, 69 from the Western Pennsylvania Medical College, and 25 from the Women's Medical College.

An Unusually Successful County Meeting.—The Auglaize County (O.) Medical Society held a jubilee meeting at Wapakoneta on December 14, 1905, which is reported to have been the most successful county society meeting on record in that section of the State. A banquet was given at which addresses were made by Dr. Brooks F. Beebe and Dr. C. A. L. Reed, of Cincinnati; Dr. Charles Collins, of Lima; Dr. H. E. Beebe, of Sidney; and Dr. F. D. Bain, of Kenton. A large part of the success of the meeting was attributed to the activity of the secretary, Dr. C. L. Mueller, who had been mentioned by some of the members of the society as a possible candidate for the secretaryship of the State medical society.

Rush Hospital.—The fourteenth annual meeting of the incorporators of the Rush Hospital for Consumption and Allied Diseases was held on December 18, 1905. A report was received concerning the new building, which is in process of erection at Thirty-third Street and Lancaster Avenue. The following officers were elected: President, Judge Ashman; vice-president, Mr. Edmund G. Hamersly; secretary, Dr. T. Mellor Tyson; treasurer, Mr. Frederick A. Sobernheimer; other trustees, Mr. Daniel Baugh, Mr. Samuel Castner, Jr., Mr. Frank Read, Dr. James Tyson, Miss Mary S. Buckley, Mr. William H. Staake, Mrs. Harry Duffield, Mr. Kenneth M. Blakiston, the Reverend James P. Turner, Mr. Charles Carver, Dr. Edward Kerr, of Downingtown; Mr. Richard G. Wood, of Conshohocken; Dr. Bertha Lewis, of Malvern; Mrs. Thomas J. White, of Malvern; Mr. Nathan E. Janney and Mr. Kendall Read.

The Annual Report of the Pennsylvania State Board of Medical Examiners was issued on December 22, 1905. Out of 460 candidates examined at the June examination there were 56 failures. There were 109 candidates from the Jefferson Medical College with two failures, or 1.91 per cent.; 81 candidates from the Medico-Chirurgical College with eleven failures, or 13 per cent.; 80 from the University of

Pennsylvania with two failures, or 2.5 per cent.; 69 from the Western University of Pennsylvania with five failures, or 7 per cent.; 25 from the Woman's Medical College with two failures, or 8 per cent. The general averages were as follows: University of Pennsylvania, 83.35; Jefferson Medical College, 80.73; Woman's Medical College, 80.49; Western University of Pennsylvania, 80.07; Medico-Chirurgical College, 78.29. Dr. William Wellington Woodward, of West Chester, received the highest average, 96.57. Four candidates were expelled for cheating. At the December examination 77 out of 107 candidates passed the examination and will be given licenses to practice in the State of Pennsylvania.

The Health of Philadelphia.—During the week ending December 23, 1905, the following cases of transmissible diseases were reported to the Board of Health:

	Cases	Deaths
Malarial fever	1	0
Typhoid fever	119	14
Scarlet fever	56	0
Chickenpox	66	0
Diphtheria	90	15
Cerebrospinal meningitis	1	0
Measles	11	6
Whooping cough	0	1
Tuberculosis of the lungs	94	25
Pneumonia	12	96
Erysipelas	0	0
Tetanus	1	1
Septicæmia	1	0
Anthrax	1	0
Cancer	20	20

The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 2; diarrhoea and enteritis under two years of age, 10. The total deaths were 524 in an estimated population of 1,438,318, corresponding to an annual death rate of 18.94 per 1,000 population. The total infant mortality was 123; under one year of age, 94; between one and two years of age, 29. There were 33 still births; 21 males and 12 females. The weather was mild, the thermometer reaching 57° on the 21st. There were 1.01 inches of precipitation.

BALTIMORE AND THE SOUTH.

The Georgia State Board of Regular Medical Examiners.

—Governor Terrell has recently reappointed as members of the board for a term of three years: Dr. J. B. S. Holmes, of Atlanta; and Dr. F. D. Patterson, of Cuthbert.

The Floyd (Ga.) County Medical Society.—The election of officers, held at the annual meeting on December 23, 1905, resulted as follows: President, Dr. W. J. Shaw, of Rome; vice-president, Dr. J. C. Mull, of Shannon; secretary-treasurer, Dr. W. L. Funkhauser, of Rome; delegate, Dr. R. P. Cox, of Rome.

The Shelby (Tenn.) County Medical Society.—The regular monthly meeting was held at Memphis on Tuesday, December 19, 1905. The programme consisted of papers on Typhoid Fever as follows: Bacteriology and Pathology, by Dr. H. S. Ferry; Symptomatology, Diagnosis, and Treatment, by Dr. B. G. Henning; Surgical Complications, by Dr. F. D. Smythe.

The Newton (Miss.) County Medical Association.—The association met at Newton on Wednesday, December 13, 1905, and elected the following officers: President, Dr. E. B. Partin, of Chunky; vice-president, Dr. A. L. Monroe, of Lawrence; secretary and treasurer, Dr. I. W. Cooper, of Newton; board of censors, Dr. R. H. Coleman, of Newton; Dr. C. V. Gilmore, of Hickory; Dr. M. L. Camp, of Chunky; delegate to the Mississippi Association, Dr. W. J. Chapman, of Newton; alternate, Dr. C. V. Gilmore, of Hickory.

The Madison (Ky.) County Medical Society.—At a meeting, held at Richmond, Ky., on Saturday, December 23, 1905, the election of officers resulted as follows: President, Dr. H. C. Jasper, of Richmond; vice-president, Dr. Vardy Taylor, of Waco; secretary and treasurer, Dr. Murison Dunn, of Richmond. A motion to establish a clinic at the infirmary for treatment of the poor and give the services of the members of the society free, provided some one could be found to furnish medicines free, was carried. The sale of patent medicines by druggists was condemned. In the meeting a movement was started to create a drug store for the sale of medicine only.

The South Side Virginia Medical Association.—This association, composed of physicians from the counties of Sussex, Surrey, Southampton, Prince George, Brunswick,

and Greenville, met at Petersburg on December 12, 1905, in tenth annual session for the reading and discussion of papers, election of officers, and social purposes. Papers were read by Dr. William S. Gordon, of the University College of Medicine, Richmond; Dr. Robert F. Williams and Dr. W. B. Foster, of the Medical College of Virginia; Dr. D. D. Wilcox, of Petersburg; Dr. Southgate Leigh, of Norfolk, and several others. The evening session was followed by a banquet.

A New Medical College for Memphis, to be called *The College of Physicians and Surgeons of Memphis*, is projected. A lot of land, 115 feet by 333 feet, has been purchased and the college structure will be erected at once. Application for a charter has been made. The company is to be capitalized at \$40,000, and will erect a handsome building to cost not less than \$60,000. Dr. Heber Jones, president of the Memphis Board of Health, is to be president of the new institution and dean of the faculty. He will be assisted by a corps of physicians, surgeons, and specialists, among them being Dr. E. C. Ellett, Dr. J. A. Crisler, Dr. M. Goltmann, Dr. J. M. Maury, Dr. Richmond McKinney, Dr. William Krauss, Dr. J. L. McLean, Dr. George B. Livermore, Dr. A. G. Jacobs, Dr. Felix Paquin, and Dr. William Miller.

The Southern Medical College Association held its annual meeting at Louisville, Ky., on Monday, December 11, 1905, under the presidency of Dr. Christopher Tompkins, of Richmond, Va. The following named colleges are members of the association: Medical Department of the University of Tennessee, Nashville, Tenn.; Medical Department of the University of Nashville, Nashville, Tenn.; Medical Department of the University of the South, Seawane, Tenn.; Medical Department of Vanderbilt University, Nashville, Tenn.; Medical Department of Fort Worth University, Fort Worth, Texas; Medical College of Virginia, Richmond, Va.; Tennessee Medical College, Knoxville, Tenn.; Medical College of Alabama, Mobile, Ala.; Birmingham Medical College, Birmingham, Ala.; University College of Medicine, Richmond, Va.; College of Medicine, Baylor University, Dallas, Texas; Medical Department of the University of Mississippi, Oxford, Miss.; Memphis Hospital Medical College, Memphis, Tenn.; Chattanooga Medical College, Chattanooga, Tenn. Delegates from nine of these institutions were in attendance at the meeting. A motion unanimously passed, provided that from the present time until January, 1908, an applicant for admission to any college of the association, must have had two years in a recognized high school, or a certificate from an acknowledged preparatory school, besides a grammar school education. After January 1, 1908, the requirements for admission are to be a high school diploma, or a certificate of graduation from a recognized preparatory school, and the courses at the college will be for four years of seven months each instead of six months, as is the case with some of the schools at the present time. The election of officers resulted in the reelection as president of Dr. Christopher Tompkins, of Richmond, and the election of Dr. F. H. Frazier, of Mobile, as vice-president.

The Mortality of Baltimore.—The death rate for the week ending December 23, 1905, was slightly lower than for the corresponding week of last year. The number recorded was 193, while 202 were reported in the corresponding week of last year, 183 in 1903 and 204 in 1902. The annual death rate in a thousand of population was: Whole, 17.59; white, 15.47; and colored, 29.02. The principal causes of death were: Typhoid fever, 1; measles, 2; scarlet fever, 1; whooping cough, 2; diphtheria, 4; membranous croup, 3; influenza, 1; consumption, 34; cancer, 4; apoplexy, 12; organic heart diseases, 13; bronchitis, 4; pneumonia, 24; diarrhoea, 3; Bright's disease, 9; congenital debility, 8; lack of care, 11; old age, 4; suicide, 1; accidents, etc., 17. The following number of cases of infectious diseases were reported, as compared with the corresponding week of last year:

	1904.	1905.
Smallpox	0	4
Diphtheria	28	42
Pseudomembranous croup	4	1
Scarlet fever	27	9
Typhoid fever	23	8
Measles	17	2
Mumps	2	1
Whooping cough	0	15
Chickenpox	12	6
Consumption	3	11

BOSTON AND NEW ENGLAND.

Appointments in Fall River, Mass.—The Mayor has appointed Dr. Michael Kelly a member of the Board of Health, and Dr. Richard B. Butler assistant city physician, both for a term of three years.

Centre District Medical Society.—The eighty-fourth annual meeting of the society will be held on Tuesday, January 9th, at the Eagle Hotel, Concord, N. H. Dr. James S. Brown, of Manchester, will present a paper on Cæsarean Section.

The Registration of Nurses in Connecticut.—The Connecticut board of examination and registration of nurses will meet at the office of the secretary, No. 1423 Chapel Street, New Haven, on January 19th and 20th. All nurses desiring to register must send their applications to the secretary before January 15, 1906. The board announces that this will be the last opportunity for the nurses of the State to secure certificates of registration until the annual meeting in June.

A Location Chosen for the State Tuberculosis Sanatorium in Vermont.—Since the announcement of Senator Proctor's gift to the people of Vermont of a sanatorium for the treatment of incipient tuberculosis, mention of which was made in our issue for September 30, 1905, the State tuberculosis commission has received many suggestions regarding a proper site for the institution. At a meeting of the commission, held at Rutland on December 27, 1905, Pittsford was decided upon as the location and arrangements will be made to commence building operations in the spring. It is hoped that the work may progress rapidly enough to permit the occupation of the building next winter.

The Tuberculosis Exhibition in Boston was held under the auspices of the board of health of Massachusetts from December 28, 1905, to January 7, 1906. A special meeting was to be held on Saturday, December 30, 1905, at which Dr. Arthur T. Cabot, of Boston, was to preside. The subject for discussion was to be The Duty of the Physician Regarding Tuberculosis. Meetings and subjects for discussion were also announced as follows: December 29th, The Employer's Opportunity; December 31st, Tuberculosis and the Workingman; January 1st, The Opportunity of Philanthropy; January 2nd, Tuberculosis Societies; January 3rd, Boards of Health and Their Responsibilities; January 4th, The Opportunity of the Trained Nurse; January 5th, Tuberculosis in Institutions; January 6th, The Opportunity of the Teacher in the Prevention of Tuberculosis; January 7th, Public Meetings at 2.30, 4.30, and 8 p. m.

CHICAGO AND THE WEST.

The Lakeside Hospital, Cleveland.—By the terms of the will of the late Miss Anne Walworth, the sum of \$10,000 is bequeathed to the Lakeside Hospital.

Cook County Hospital, Chicago.—The annual report of this hospital shows that the year 1905 has been an important one in the history of the institution. During the year 25,995 cases were treated at this hospital, the daily average being 917, which is 100 patients each day in excess of the daily average of last year.

Western Surgical and Gynaecological Association.—At the fifteenth annual meeting of this association, held in Kansas City, the following officers were elected for the ensuing year. President, Dr. Malcolm L. Harris, of Chicago; first vice-president, Dr. A. L. Wright, of Carroll, Ia.; second vice-president, Dr. C. Lester Hall, of Kansas City, Mo.; secretary and treasurer, Dr. Arthur T. Mann, of Minneapolis. Dr. C. H. Wallace, of St. Joseph, Mo., and Dr. W. W. Grant, of Denver, were elected to fill vacancies in the executive council. Salt Lake City was selected as the place of their next annual meeting.

The First (Mich.) Councilor District Medical Society, embracing the medical societies of Washtenaw, Lenawee, Monroe, Macomb, Oakland, and Wayne counties, held its second annual meeting at Ann Arbor on Friday, December 22, 1905. Addresses were to be made as follows: Dr. Victor C. Vaughan was to deliver an address of welcome, Dr. Leartus Connor was to speak on Organization, Dr. David Inglis was to speak on Congratulation, and Dr. Andrew P. Biddle's topic was to be Farewell. Papers were to be read by Dr. Theodore A. McGraw, Dr. Alvah N. Collins, Dr. R. S. Rowland, and Dr. Emil Amberg, of Detroit; Dr. Elmore E. Butterfield, Dr. Reuben Peterson; Dr. William F. Breakey, Dr. R. Bishop Canfield, and Dr. Vernon J.

Wiley, of Ann Arbor; Dr. Charles T. Southworth, of Monroe; Dr. Irwin H. Neff, of Pontiac; Dr. Harry F. Taylor, of Mt. Clemens; and Dr. Rosgrave M. Eccles, of Blissfield. The officers of the society are: Councilor, Dr. Leartus Connor; president, Dr. John A. Wessinger; secretary, Dr. John William Keating.

Mortality of Michigan During November, 1905.—The total number of deaths returned to the secretary of state for the month of November was 2,644, representing a total death rate of 12.6 in 1,000 population. A slight falling off from the rate of the previous month, 13.1, is observed. There were 445 deaths of infants under one year of age; 164 deaths of children aged one to four years, inclusive; and 791 deaths of persons aged 65 years and over. Important causes of death were as follows: Tuberculosis of the lungs, 163; other forms of tuberculosis, 26; typhoid fever, 93; a decrease of 9 from the number returned for October; diphtheria and croup, 71; scarlet fever, 22; measles, 3; whooping cough, 11; pneumonia, 187; diarrhoeal diseases of infants under two years of age, 74; influenza, 17; cancer, 143; accidents and violence, 158. The deaths from pneumonia more than doubled in number as compared with the preceding month, and influenza also increased, although the total number of deaths from this cause was only 17. A marked decrease was shown in diarrhoeal diseases. There was one death from smallpox, which occurred in the city of Alma, Gratiot county.

Statement of Mortality in Chicago for the Week Ending December 30, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Dec. 30, 1905.	Dec. 23, 1905.	Dec. 31, 1904.
Total deaths, all causes.....	525	496	654
Annual death rate in 1,000.....	13.47	12.99	17.68
Sex.....			
Males.....	304	281	364
Females.....	221	215	290
Age.....			
Under 1 year.....	97	76	119
Between 1 and 5 years.....	39	40	48
Between 5 and 20 years.....	16	20	55
Between 20 and 60 years.....	220	245	301
Over 60 years.....	113	109	133
Important causes of death.....			
Apoplexy.....	15	6	12
Bright's disease.....	40	45	42
Bronchitis.....	17	11	31
Consumption.....	59	63	68
Cancer.....	20	20	23
Convulsions.....	17	7	14
Diphtheria.....	14	8	15
Heart diseases.....	10	38	48
Infl. et al.....	5	5	13
Intestinal diseases, acute.....	22	18	20
Measles.....	3	3	5
Nervous diseases.....	25	22	31
Phthisis.....	71	83	111
Scarlet fever.....	8	5	2
Smallpox.....	0	0	3
Smallpox.....	1	0	6
Typhoid fever.....	1	11	15
Violence (other than suicide).....	38	27	32
Wounds.....	6	2	6
All other causes.....	114	114	120

The month has closed with the lowest December mortality rate on record—although there were 29 more deaths reported during the week than during the week previous. The rate for the month is about 13.44 annual, as compared with an average of 15.06 for the previous decade, with 13.79 the previous lowest in 1898, and with the previous highest of the decade, 18.31 in 1903. The public health indications for the beginning of the new year are most propitious. Contagious and infectious diseases are at a minimum, both in the number of cases reported to the Division of Contagious Diseases and in the findings of contagious disease germs in the laboratory.

GENERAL.

The United States Pharmacopoeial Business Affairs.—A meeting of the board of trustees was held at Pittsburgh on Saturday, December 2, 1905. The question of an edition in Spanish was considered and a committee was appointed to make the preliminary arrangements for an edition of 2,000 copies.

The National Association for the Study and Prevention of Tuberculosis. Announcement is made by the board of directors of the national association for the study and prevention of tuberculosis of the preliminary arrangements for the second annual meeting of the association,

which will be held in Washington, May 17, 18, and 19, 1906. Two new sections have been established—one on Surgical Tuberculosis and the other on Tuberculosis in Children. The officers of the sections are as follows: Sociological Section: Chairman, Mr. William H. Baldwin, of Washington, D. C.; secretary, Miss Lilian Brandt, of New York; Clinical and Climatological Section: Chairman, Dr. Vincent Y. Bowditch, of Boston, Mass.; secretary, Dr. Edwin A. Locke, of Boston, Mass.; Pathological and Bacteriological Section: Chairman, Dr. Edward R. Baldwin, of Saranac Lake, N. Y.; secretary, Dr. Hugh M. Kinghorn, of Saranac Lake, N. Y.; Section on Surgical Tuberculosis: Chairman, Dr. W. W. Keen, of Philadelphia, Pa.; secretary, Dr. Robert G. Leconte, of Philadelphia, Pa.; Section on Tuberculosis in Children: Chairman, Dr. W. P. Northrup, of New York; secretary, Dr. Roland G. Freeman, of New York.

The Commission of the Isthmian Canal has made public its report. It is stated that after a decided increase in the number of cases of yellow fever during June the disease is now under control, and the arrangements for fumigating houses and cleaning up the town and camps have reached such a point as was never before thought possible. There have been two outbreaks of bubonic plague consisting of only two cases, one occurring in June and the second in August. The drastic and instant measures taken to quarantine the infected spots were enough to stamp out the disease. The sanitation of Panama and Colon is still progressing and the two towns are being wholly transformed. Both are supplied with a water system and the work of paving is making favorable progress.

Dental Surgeons for the Army.—Among the bills now before Congress is one for the reorganization of a corps of dental surgeons of the army; not to exceed in number actual requirements, nor proportion of one to one thousand in the regular army. Appointees must be citizens, between 22 and 30 years of age, graduates of standard American dental colleges, of good moral character and professional repute. They must pass physical and professional examinations which shall include tests of skill in dentistry. Dental surgeons attached to the medical department of the army at time of passage of act may be eligible to appointment, three to rank of captain and the others to rank of first lieutenant, on the recommendation of the Surgeon General, subject to examination; professional examination may be waived in case of dental surgeons whose efficiency reports and entrance examinations are satisfactory to the Surgeon General. The right to promotion shall be limited to the rank of captain after five and major after ten years' service; number of majors shall not at any time exceed one eighth nor the number of captains one third the whole number in the dental corps. The Surgeon General is to organize a board of three examiners to conduct the professional examinations, two civilians whose qualifications are certified by the executive council of National Dental Association; and the third from the contract dental surgeons.

Hypermnesia for Calendar Dates in a Low Grade Imbecile.—Van der Kolk and Jansens report an account of a case of extraordinary memory for calendar dates relating to birthdays, fêtes, etc., extending over two previous years, in an imbecile of such low grade that no satisfactory psychological examination of him could be made, the patient being unable to comprehend what was wanted of him. This man worked in the mattress factory of the asylum, but could never be taught more than to fetch and carry. He had an extraordinary fondness for calendars, of which he collected all possible, making piles of leaves which he apparently studied continually. He could talk, and answered promptly questions relating to dates, but otherwise was incapable of learning anything.—(*Allgemeine Zeitschrift für Psychiatrie*, through the *Journal of Nervous and Mental Diseases*, November, 1905.)

Pith of Current Literature.

AMERICAN MEDICINE.

DECEMBER 30, 1905.

1. The Unconscious Value of Careful Clinical Examination of Patients, By LOUIS FAUGERES BISHOP.
2. The Transplantation of Veins and Organs, By ALEXIS CARREL and C. C. GUTHRIE.
3. Eucain Lactate as an Anæsthetic for Operations in the Nose and Throat, By THOMAS J. HARRIS.
4. A Plea for the Convict Insane, By HORACE PHILLIPS.
5. Malarial Infection in Kurdistan, By H. L. UNDERWOOD.
6. A Preliminary Report on the Relation of Mind Rhythm to Nervousness, By T. H. EVANS.
7. Indications and Contraindications to the Use of the Obstetrical Forceps, By J. THOMPSON SCHELL.

2. **The Transplantation of Veins and Organs.**—Carrel and Guthrie report their experiments in transplantations. Among these were the amputation of the thigh of a dog, which member was replanted by suturing the vessels, nerves, bones, muscles, aponeuroses, and the skin. The autopsy showed that the circulation had been interrupted by the dressing and not by the obliteration of the anastomoses which were perfectly good. The heart of a small dog was extirpated and transplanted into the neck of a larger one by anastomosing the cut ends of the jugular and the carotid artery to the aorta, the pulmonary artery, one of the vena cava and a pulmonary vein. Circulation was established. A kidney was extirpated and transplanted by anastomosis of the renal artery to the carotid artery, of the renal vein to the jugular, and the ureter was made to open into the lumen of the œsophagus. The circulation was found normal, and a good excretion of urine was going on. The thyroid gland was extirpated and replanted with reversal of the circulation. The circulation was good.

5. **Malarial Infection in Kurdistan.**—Underwood suggests that in Turkey, at all events, malaria is often transmitted by vermin through direct inoculation. The campaign against the mosquito should, therefore, be supplemented by persistent warfare against bedbugs, fleas, and lice.

7. **Indications and Contraindications to the Use of the Obstetrical Forceps.**—Schell expresses the opinion that if chloroform were used for the short, low, and easy forceps operations, and ether for the long, high, and tedious ones, the proportion of good results, at least as to the condition of the pelvic floor, would be greater than with the older and rather brutal method of delivery without an anæsthetic.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

DECEMBER 28, 1905.

1. The Muscle Splitting or McBurney Incision in Acute Appendicitis, With or Without Abscess. The Course and Result in 75 Consecutive Cases, By L. R. G. CRANDON and DAVID D. SCANNELL.
2. The Municipal Control of Tuberculosis, By EDWARD O. OTIS.
3. Two Cases of Anatomical Anomaly of the Large Intestine, By SAMUEL ROBINSON.

1. **The Muscle Splitting or McBurney Incision in Acute Appendicitis, With or Without Abscess. The Course and Result in 75 Consecutive Cases.**—Crandon and Scannell advocate the muscle splitting incision for cases of acute appendicitis, and come to the following conclusions: The incision through the right rectus, as well as that through the right linea semilunaris, is undesirable, because: 1, It is usually not over the appendix; 2, it is frequently internal to the abscess; and, 3, it offers in cases drained a distinctly greater chance of hernia. In fifteen years returned to the Boston City Hospital 22 patients who had been operated upon for appendicitis, and who now came for operation of hernia through appendectomy scars. In seventeen of these

patients the old fashioned direct oblique incision had been made, and in five the right rectus incision. No patient returned with hernia resulting from muscle splitting incision. The muscle splitting or McBurney incision is desirable in all cases of appendicitis, unless an abscess is obviously pointing to a remote or unusual situation. The form of operation opens most often directly over the appendix; it can be enlarged by prolonging the split in each muscle plane to whatever extent is desirable; and it can be drained for a short or long time without danger of hernia.

2. **The Municipal Control of Tuberculosis.**—Otis thinks that the municipality should, through its board of health, increase its function in its efforts to control tuberculosis. Among its powers should be: notification and inspection of the patients and their domiciles, disinfection; isolation of dangerous cases in adequate hospitals; prohibiting of promiscuous spitting, with free distribution of spit cups or napkins, with direction for their use; free examination of sputum; medical inspection of factories and workshops; tenement house inspection, with reference to overcrowding, air spaces, and general hygienic conditions; medical inspection of schools.

3. **Two Cases of Anatomical Anomaly of the Large Intestine.**—Robinson reports two cases, and reviews the history and literature pertaining to anomalies of the large intestine, with their importance for such operations as appendicitis.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

DECEMBER 30, 1905.

1. Pathological Physiology, a Neglected Field, By WINFIELD S. HALL.
2. The Abrupt Onset of Typhoid Fever, By MORRIS MANGES.
3. A Critical Study of the Various Methods Employed for Enumerating Blood Platelets, By JOSEPH H. PLATT.
4. Variations in the Ratio of Diameters of the Normal Chest in Different Ages, By W. A. BESSESEN.
5. Myoma of the Œsophagus, By JOHN BRYANT, JR.

2. **The Abrupt Onset of Typhoid Fever.**—Manges distinguishes two important groups of cases with an abrupt onset. First, those which really are abrupt; and, second, those which seem to be abrupt and yet are actually not so; those melancholy cases of walking typhoid, by no means infrequent, in which the onset of the disease has been insidious and which invite medical aid only after the appearance of some catastrophe, such as perforation, hæmorrhage, peritonitis, etc. Cases of abrupt onset may be ushered in variously, either with chills, severe pains in the abdomen, head or other parts of the body, or violent delirium; or they may simulate cases of appendicitis, nephritis, pneumonia, pleurisy, grip, or diphtheria with throat lesions. The explanations for this sudden onset are that in some patients the typhoid bacilli have developed silently in the organism and without presenting any marked clinical features until the disease is well developed; in others, however, it must be the rapid development of the bacilli in the body.

4. **Variations in the Ratio of Diameters of the Normal Chest at Different Ages.**—Bessesen comes to the conclusion from his observations that the method of using fixed bony landmarks for the placing of chest diameters is accurate and readily applied. The use of median values for evaluating anthropometric data saves time, and the results derived from this method of evaluation are more accurate than the arithmetical average. Important features in the shape of the chest, as well as in the movement and the capacity, may be appreciated by an observation of its principal diameters. The human chest, in the course of its development, has passed through various stages from the deep or dorsoventral to the broad or transverse type. The

newborn child represents the transitional type of chest—it is round chested. During the first five years of life the most conspicuous change is the rapid widening of the chest in its transverse diameter—it becomes broad chested. At puberty the length of the chest takes on an active increase in growth over the other diameters—the adolescent becomes long chested. From the eighteenth to the twenty-fifth year the development of the chest is fairly uniform in all its dimensions and represents the highest development—the broad long chest. The dorsoventral diameter increases at an even rate from birth to maturity. The phthisical chest of adult years, in general, shows an arrest in development of the transverse diameter following puberty, and is a narrow chest, tending to the rounded form, with a relative elongation.

MEDICAL NEWS.

December 30, 1905.

1. The Essentials of Successful Röntgen Ray Therapy,
By CHARLES L. JONES AND J. L. GARD.
2. A Clinical and Bacteriological Study of the Communicability of Cerebrospinal Meningitis and the Probable Source of Contagion (*Concluded*),
By CHARLES BOLDUAN and MARY E. GOODWIN.
3. Thiosinamine in the Treatment of Tinnitus Aurium,
By S. McCULLAGH.
4. Some Observation of Leucoderma (Addison's Keloid),
By F. ROBBINS.
5. The Medical Department of Bilid Prison and Some of the Diseases Among the Prisoners,
By W. R. MOULTON.
6. Infection of the Gallbladder in Typhoid Fever,
By S. P. KRAMER.

2. **A Clinical and Bacteriological Study of the Communicability of Cerebrospinal Meningitis and the Probable Source of Contagion.**—Bolduan and Goodwin from their report on 144 patients suffering from cerebrospinal meningitis say that: 1, The disease has occurred in several large epidemics during the past century; sporadic cases are met with in the periods between these epidemics and constitute the link between the epidemics; 2, we do not know the circumstances giving rise to these epidemic outbreaks; 3, the epidemic form of cerebrospinal meningitis is almost invariably associated with the meningococcus of Weichselbaum; the sporadic cases are frequently associated with this organism; 4, during the first week of the disease the meningococcus is present in the nasal mucus in fully half of the cases; later in the disease it is found in a smaller fraction of cases. It also occurs in the nasal secretion of some persons who are in close contact with cases of cerebrospinal meningitis. In their series this was about 10 per cent. of the persons examined; 5, the meningococcus has a low vitality, being rapidly killed by drying and on exposure to sunlight. This makes infection by dust extremely improbable; 6, the disease seems distinctly communicable in the sense that the organism is transmitted from the nasal secretion of one person to another. The transmission of the organism, however, is not synonymous with transmission of the disease; 7, the susceptibility of the individual is an important factor in the development of the disease; 8, it seems unlikely that infection is frequently due to trauma or the result of overexertion; 9, cerebrospinal meningitis in other animals seems to have no connection with the disease in man. The subject, however, has not been sufficiently worked out to admit of positive statements; 10, there is no evidence to show that the disease is carried by vermin or insects; 11, the disease in some epidemics affects mostly infants, in others, older children, and sometimes chiefly adults. The reason for this is not at all clear; 12, the period of incubation seems to be short, from one to four days; 13, there is no evidence of the occurrence of "dwelling infections."

3. **Thiosinamine in the Treatment of Tinnitus Aurium.**—McCullagh describes his experience with

thiosinamine or allylsulphocarbomide in the treatment of tinnitus. It is a mixture of 2 parts of the oil of black mustard, 1 part of absolute alcohol, and 7 parts of aqua ammonia. He comes to the conclusion that thiosinamine (1) exerts a markedly beneficial action on ear disease accompanied by the formation of new connective tissue; (2) that this beneficial action is due to an increased pliability of this tissue allowing the usual forms of treatment to accomplish their object better; (3) that its administration should always be accompanied by mechanical measures; (4) that as good results may be obtained by administration by the mouth as hypodermically; (5) that better and more prompt results may be obtained in recent cases; (6) that it exerts a beneficial action on vertigo; (7) that care should be used in looking for contraindications; (8) that better results may be obtained with it in the relief of tinnitus than with any drug used heretofore.

6. **Infection of the Gallbladder in Typhoid Fever.**—Kramer reports a case of a house epidemic of typhoid fever. The patients were five children who recovered, and their mother, who succumbed. The woman had a specially severe attack. In the latter part of the fourth week of the disease she seemed to be convalescent, the temperature having remained normal several weeks. At the beginning of the fifth week, on the thirty-fifth day of her sickness, she had a chill, the temperature rising suddenly to 104° F., with tenderness and pain in the right hypochondrium. The temperature thus remained high for the succeeding four days, the pain and tenderness abating somewhat. When an examination was made a provisional diagnosis of typhoid perforation on the right side was made and laparotomy performed. The stomach was found to be so enormously dilated that it reached to the symphysis, crowding the viscera entirely backwards. The stomach was opened and washed out, but no perforation was present. The gallbladder, however, was also greatly distended. Upon opening it about two ounces of clear serum and pus were removed, followed by the evacuation of 35 gallstones. The patient died six hours after the operation.

MEDICAL RECORD.

December 30, 1905.

1. Chronic Discharge in Organic and Functional Disorders of the Deep Urethra; Diagnosis and Therapy,
By JOHN M. THOMPSON.
2. Epilepsy the Strangest Disease in Human History,
By WILLIAM P. SPRATTLING.
3. Concerning the Occurrence of Bacteria in the Normal Adult Intestine, with Special Reference to the Aetiology of Enterotoxism, By HARRIS A. HOUGHTON.
4. Osteosculpture; an Original Method for the Study of Osteology,
By H. C. GIFFORD.
5. Dermoid Ovarian Cyst Simulating Floating Kidney,
By A. E. ISAACS.
6. The Alkalinity of the Blood in Febrile Toxæmia,
By FREDERICK W. D'EVELYN.

1. **Chronic Discharge in Organic and Functional Disorders of the Deep Urethra; Diagnosis and Therapy.**—Thompson divides the diseases peculiar to the deep urethra, characterized by persistent or periodical discharge from the meatus or appearing in the urine into two types, organic (chronic posterior urethritis, chronic prostatitis, chronic cystitis, and chronic seminal vesiculitis) and functional (urethrorrhœa, prostatorrhœa, spermatorrhœa, and phosphaturia). Diagnosis should always be made with the assistance of the microscope, and it should be determined if the disease is of organic or functional nature, or combines both forms. In all functional derangements of the sexual organs mental and nervous disturbances will be found. Medical agents hold a subordinate place in the treatment, but the patient should restore his lost nervous force. In

the organic processes are used gradual dilatation, irrigation, meatotomy, massage, hydrotherapy, electricity, and medicinal tonics.

2. Epilepsy the Strangest Disease in Human History.—Sprattling advises as the object of the National Association for the Study of Epilepsy: 1. To promote the general welfare of sufferers from epilepsy. 2. To stimulate the study of the causes and the methods of cure of this disease. 3. To advocate the care of epileptics in institutions where they may (a) receive a common school education; (b) acquire trades; (c) be treated by the best medical skill for their malady. 4. To assist the various States in America in making proper provisions for epileptics.

3. Bacteria in the Normal Adult Intestine, with Special Reference to the Aetiology of Enterotoxism.—Houghton thinks that chemical examination of the faeces with a view to determine the amount of intestinal putrefaction has proven to be of some value when taken in relation to urinary examinations. Numerous intestinal septic have been put on the market by manufacturers, and have been tried by the physician, but the results have not been encouraging. The successful treatment will be to teach the patient how to live; to use proper balance in diet, exercise and good habits.

6. The Alkalinity of the Blood in Febrile Toxaemia.—D'Evelyn reports a case, the history of which proves the statement of Loeb that "the sodium ions of the blood are essential for the maintenance of life phenomena." The point has already been clinically urged by Sajous, when he stated that diminished alkalinity of the blood goes hand in hand with increased susceptibility to infection, and that in febrile diseases there is a direct ratio between a deficiency of sodium and death.

BRITISH MEDICAL JOURNAL.

December 16, 1905.

1. Carcinoma is a Parasitic Disease (Bradshaw Lecture),
By H. T. BUTLIN.
2. Observations on the Heredity of Insanity,
By A. R. URQUHART.
3. Prognosis in Mental Diseases,
By R. JONES.
4. On Post Mortem Examinations Which Do Not Reveal
the Cause of Death,
By F. J. SMITH.

1. Carcinoma.—Butlin insists that carcinoma is a parasitic disease, not in the limited sense as synonymous with infective, but in the larger and wider sense to express the fact of one organism living at the expense of another organism. Certain important modifications have taken place in our views of carcinoma. 1. It is improbable that carcinoma cells are derived from the cells of the part in which it first appears—*i. e.*, there is no ground for the theory that carcinoma is derived from the extension downwards of the normal process of the epidermis. 2. The growth of carcinoma depends on the growth and reproduction of its own proper cells, and does not depend on transformation of the neighboring cells into carcinoma cells. 3. The stroma or framework of carcinoma is derived from the connective tissue of the part in which the carcinoma grows. On the above and other grounds the author maintains that the carcinoma cell is an independent organism, like many a protozoan. The anatomy of the cell is that of the simplest forms of animal life. Of its physiology little is known. Reproduction takes place by mitosis and by amitosis, and the conjugation of nuclei has been observed in carcinoma of the highest as well as of the lowest animals. Cancer cells exhibit a singular tenacity of life. They do not produce any specific poison which is hurtful to the tissues of the host, but they are liable to the attacks of pathogenic organisms. To explain the localization of cancer we may assume that there are tissues and organs of the host which are not suited to the support of the cancer cell, and which never can be rendered suitable; also

that there are other tissues and organs which are only suitable at certain times and under certain conditions. The greater liability of one sex than another to cancer is largely a question of the greater or less liability of particular organs and tissues, and of their condition at the time of the attack. Inheritance of cancer is the inheritance, not of the disease, but of organs and tissues which are peculiarly vulnerable to the disease. The influences of dwelling, soil, and climate are at present discredited in favor of age incidence. In favor of the new theory that the cancer cell is a parasite introduced into the body from without, are the following facts: 1. Carcinoma first appears in a very large number of cases either on or just beneath the external or internal surface of the body. 2. The natural or spontaneous occurrence of carcinoma accords in its characters and course with the characters and course of carcinoma which has been inoculated. 3. The more frequent occurrence of cancer in particular houses and in particular districts suggests that the parasite may exist outside the body of the host in those houses and districts. The evidence against the entrance of the parasite from without are: 1. The characters of the carcinoma cell, which conform so closely to the characters of the epithelium of the part in which the growth first appears. The squamous type of carcinoma never arises except in the vicinity of squamous epithelium; the same holds true of the columnar and spheroidal types. 2. The stroma of each of the three types of growth is peculiar to that type, within certain limits, and is not common to all three. It is difficult to conceive that parasitic cells should acquire such a specific influence over the connective tissue producing elements of the part in which they settle. 3. The longer men and women live the more likely are they to suffer from carcinoma, yet inoculation experiments show that the tissues of the young and healthy are quite as well suited to the growth of the parasitic cells.

3. Prognosis in Insanity.—Jones states that there is probably always some mental weakness after an attack of insanity, and that there is no such happy issue as a complete and permanent recovery. Tuberculosis is one of the most frequent causes of death in insanity. During 1903 phthisis was responsible for 16.3 per cent. of all deaths in institutions for the insane. Certain types of insanity bear the stamp of incurability from the start. Such are the forms accompanying general paralysis, cerebral tumors, advanced tuberculosis, or malignant disease, diabetes mellitus or diseases necessarily fatal and attacking the great internal organs (heart, liver, kidneys, etc.), epilepsy, paralysis from hæmorrhage, embolus, or thrombus; also those conditions described as paranoia or chronic delusional insanity, alcoholic insanity with hereditary predisposition, and senile dementia. All these have an absolutely unfavorable prognosis, and the same is true of congenital mental defects of all kinds. General paralysis is peculiarly unyielding to medical treatment, though some forms are more chronic than others. In acute insanity there is one form which is most fatal—acute delirious mania. The condition is rare, and the patients usually die before they reach the asylum stage. Certain signs in mental disease are favorable to recovery. The first of these is normal sleep; second, a return to the normal mean average bodily weight; third, a return of the natural facial expression and appearance; fourth, the revival of natural affections; fifth, an interest in their own personal appearance; and sixth, the consciousness and recollection of having been ill. The cause of insanity not infrequently has a direct bearing upon prognosis. The prognosis is better where there is a single cause than where there are several. The appearance of an acute inflammation may cause the recovery of a chronic case. Attacks of long slow incubation are of unfavorable prognosis.

LANCET.

December 17, 1905.

1. Carcinoma is a Parasitic Disease (the Bradshaw Lecture), By H. T. BUTLIN.
2. Habit Spasm in Children, By G. F. STILL.
3. A New Synthesis of Tyrosine from Anhydrous Prussic Acid and Oxybenzaldehyde; an Explanation of Its Mode of Formation in the Animal Body, By W. L. THOM.
4. Some Investigations of the Nervous Manifestations of Acute Rheumatism, By F. J. POYNTON and A. PAINE.
5. The Leptus Autumnalis and Its Skin Lesion, By W. MACLENNAN.
6. The Treatment of Tuberculosis of the Urinary System by Tuberculin (T. R.), By J. G. PARDOE.
7. Aesculin in Conjunction with Finsen Light in the Treatment of Lupus Vulgaris, By G. H. GRAHAM.
8. Sanatoriums for the Workers; Their Need and Utility, By C. H. GARLAND.

2. **Habit Spasm.**—Still defines habit spasm of children as oft repeated and seemingly purposeless movements which most commonly affect the face or head, and which are for varying periods persistent in kind, whether the movement be a twitch of one muscle, or a more complicated action of several muscles. A remarkable feature is the diminution or cessation in many cases as long as the child is conscious of being under observation. Another manifestation is what has been called "psychical tic"—utterance of foul language without any reason, delusions as to uncleanness of the hands, etc. Habit spasm is only slightly more frequent in boys than in girls. The one fact which stands out preeminently in the history is nervous instability; rheumatism; local irritation—*e. g.*, dentition, caries of the teeth, conjunctivitis, astigmatism, etc., mental strain and mental shock play a large part. Compulsory education is responsible for many cases of habit spasm. Mental exhaustion aggravates it if it does not start it. Habit spasm is sometimes mistaken for chorea; the latter shows movements varying quite irregularly from minute to minute. The most effectual treatment is a change of scene to the seashore or the country. School should be forbidden, and no lessons allowed for a time. All sources of local irritation should be sought for and removed. As regards drugs the author has found a mixture of arsenic and bromide most useful. Ergot occasionally has a beneficial effect.

4. **Nervous Manifestations of Rheumatism.**—Poynton and Paine summarize their views as to rheumatism and its nervous manifestations, as follows: 1. There is a great infective process, the rheumatic, to be placed among that series of infective processes where the staphylococcus, streptococcus, pneumococcus, and gonococcus are to be found, and that the infective agent is a diplococcus with, in all probability, some peculiar characteristics. 2. Eventually rheumatic chorea will prove to be a local infection of the nervous system and most of its symptoms to be the result of a slight meningo-encephalitis and possibly meningomyelitis. The authors' reasons for this belief are: (a) They have isolated and cultivated the diplococcus from the spinal fluid in four cases of fatal rheumatism, in three of which there was chorea at the time of death. (b) They have produced twitching movements, arthritis, endocarditis, and pericarditis by intravenous injections of the diplococcus into rabbits. (c) They have demonstrated them in the brain and pia mater of the rabbit that had shown the twitching movements. 3. In rheumatic hyperpyrexia no gross macroscopical lesion is found; it is probably an acute rheumatic toxæmia in contrast to the multiple and slight local lesions which exist in chorea.

6. **Tuberculin in Genitourinary Tuberculosis.**—Pardoe reports a series of 21 cases of tuberculosis of the

urinary system treated with tuberculin (T. R.). Not all such cases are suitable for treatment by tuberculin, for the reason that local reaction undoubtedly does occur. So that where both ureters are affected, it should not be used, as any acute swelling of the infected area would cause total blocking of the ureters and result in suppression of the urine. It should, therefore, be a rule never to commence the use of tuberculin until after a careful cystoscopic examination has been made. There should be a clear orifice and a clear urinary discharge on one side at all events. The writer begins with a dose of one five hundredth of a milligramme of tuberculin, and gives increasing doses every other day until a definite reaction is obtained. The dose is then reduced to that quantity which apparently causes no reaction, and is given steadily once a week for long periods. In favorable cases the number of tuberculin bacilli in the urine steadily decreases.

LYON MEDICAL.

November 26, 1905.

1. Contribution to the Study of Tuberculous Gangrene, By PIERY and FARSAAT.
2. Acute Purulent Arthritis of the Knee in a Child, Following Caries of the Patella with Perforation, By Dr. KAEPELIN.
3. Total and Subtotal Abdominal Hysterectomy, By Dr. ROBERT SOREL.

1. **Tuberculous Gangrene.**—Piery and Farsat report the case of a man, 60 years of age, who had suffered from suppurative cervical adenitis, which left a permanent fistula, when he was 15 years old, began to lose the ends of his fingers and toes from gangrene at the age of 38, and when seen by them had tubercular arthritis, white swelling of the right knee joint, spondylitis, cervicodorsal kyphosis, arthritis of both shoulder joints, and fibrous pulmonary phthisis.

2. **Acute Purulent Arthritis of the Knee in a Child, Following Caries of the Patella with Perforation.**—Kaepelin reports the case of a girl, 11 years old, in whom an affection which was probably a purulent hygroma induced caries of the patella which in turn caused perforation of the latter and an acute purulent arthritis of the knee joint. An arthrotomy was performed, but a secondary intraepiphyseal resection was necessary before the child recovered.

3. **Total and Subtotal Abdominal Hysterectomy.**—Sorel favors the total operation as the one of choice, but considers the subtotal indicated in certain cases where manipulations in the pelvis are difficult, provided the lesions are not such as to demand drainage.

PRESSE MEDICALE.

December 2, 1905.

1. Superficial Epithelioma of Leucoplastic Mucous Membranes, By Professor PAUL RECLUS.
2. The Micrococcus Catarrhalis, By P. LE DAMANY.
3. List and Definitions of the Deviations of the Uterus, By P. F. FOUILLÉE.

1. **Superficial Epithelioma of Leucoplastic Mucous Membranes.**—Reclus reports several cases of this nature, the history of the first of which is very striking. Patches of leucoplasia appeared on the tongue of a patient in 1863. In 1871 a small lenticular tumor appeared in a patch and slowly increased in size until it was removed by Professor Richet in 1881. It recurred and was again extirpated by Richet during the following year. During the same year there was another recurrence complicated by involvement of the submaxillary gland. The tumor and gland were removed by Humbert. In 1887 the tumor again reappeared and was removed by Reclus, who has had occasion since that time to repeatedly remove it, once in 1893, twice in 1898, again in 1900, again in 1903 and finally in 1905. The tissue removed in 1903 was examined in the laboratory of M. Cornil and found to present the characteristics of an ordinary leucoplasia with an

epitheliomatous change in its centre. In all of the cases described the tumor developed in a patch of leucoplasia on a mucous membrane, was small, lenticular or elliptical, and exhibited a marked tendency to recurrence, not in situ, but in another patch of leucoplasia. Recurrence in situ in the ordinary way was noticed only twice. In spite of their great tendency to recurrence these tumors did not seem to be malignant and in none was there any concomitant adenitis.

2. The Micrococcus Catarrhalis.—Le Damany describes the method he employs for the culture of this micrococcus.

3. List and Definitions of the Deviations of the Uterus.—Jayle describes the various positions which may be assumed by the uterus, gives the name employed to designate each position and illustrates each with a diagram.

SEMAINE MEDICALE.

The Disturbances of Baræsthesia (Sensitiveness to Pressure) and Their Coexistence with Vibratory Anæsthesia,
By Professor G. MARINESCO.

The Disturbances of Baræsthesia.—Marinesco denominates as baræsthesia sensitiveness to pressure on the part of the deep tissues, bones, tendons, aponeuroses, and muscles. In various diseases of the nervous system this sensitiveness undergoes various modifications, to which he has given two names, baranæsthesia when the sensibility is reduced, barhypoæsthesia when it is increased. He considers that this form of sensitiveness is distinct from tactile sensibility, and that its study has been neglected, and groups the disturbances of sensibility met with in various pathological conditions of the nervous system in the following manner: 1. Alteration in every form of sensibility. 2. Abolition of sensitiveness to pressure and to the tuning fork with preservation of all other forms. 4. Alteration of sensibility to heat, touch and pain with conservation of sensibility to pressure and to the tuning fork.

BERLINER KLINISCHE WOCHENSCHRIFT.

December 11, 1905.

1. The History, Importance, and Problem of the Polyclinic for Medicine of the Friedrich-Wilhelms University at Berlin, By H. SENATOR.
2. The Reproduction of Toxine from its Antitoxine Combinations, By J. MORGENROTH.
3. Aural Examination and Anatomical Report in Progressive Deafness, By G. BRÜHL.
4. Fracture and Version of the Arm, By APFELSTEDT.
5. The Treatment of Acute Inflammation with Stasis Hyperæmia (*Concluded*), By R. STICH.
6. Review on the Frequency of the Primary Intestinal Tuberculosis in Berlin (*Concluded*), By EDENS.

2. The Reproduction of Toxine from Its Antitoxine Combinations.—Morgenroth concluded from his experiments that through treatment with hydrochloric acid in aqueous solution at a moderate temperature the snake hæmolysin is capable of transformation into an isomeric form. This new combination does not possess the capability to bind the antitoxine produced by injection of genuine snake venom but will form with lecithin a lecithid. The modification can return to its original form after evaporation of the acid. The modified form of the venom is produced even when combined with antitoxine. Owing to this fact there will be produced on the addition of hydrochloric acid a splitting up of the toxine antitoxine combination, which in the original state is incapable of decomposition. When at the same time lecithin is in sufficient quantity the toxine will become liberated as lecithid and will therefore lose its ability to react with the antitoxine.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT.

December 5, 1905.

1. Mental Disturbances Immediately Following Concussion of the Brain (*To be continued*), By K. HEILBRONNER.
2. Treatment of Wounds, By E. GRASER.
3. Surgery of the Heart and Pericardium (*To be continued*), By H. LINDNER.
4. Diagnosis and Treatment of Nasal Diseases by Means of Sonderrmann's Suction Apparatus, By A. HONNETH.
5. Operations in Patients' Homes, By H. LADENBURGER.
6. Iodine for Subcutaneous Use (Iothion), By H. RICHARTZ.
7. The Left Hemisphere of the Brain, By LIEPMANN.

2. Treatment of Wounds.—Graser speaks of the impossibility of completely sterilizing the hands by any method at present in use and urges the use of rubber gloves and of keeping the hands themselves out of the wounds as much as possible. He gives directions for the sterilizing of the gloves by scrubbing them with soap and hot water for four minutes and immersing them in a one to 1,000 sublimate solution for two minutes. He employs a mouth protective of gauze while operating. As to dressings, he says that wounds which cannot be fully closed, may be subjected to exposure to air without fear and do not require any dressing to bring about healing. In these cases he uses only a small covering of fine gauze which is attached to the area surrounding the wound by colloidion or zinc adhesive plaster.

4. Diagnosis of Nasal Diseases.—Honneth has used Sonderrmann's suction apparatus in cases of empyema and suspected empyema of the accessory cavities of the nose and concludes that it is an indispensable instrument for the accuracy of diagnosis of these conditions. In the acute cases, the effects of suction were therapeutically valuable, but no effect of value could be noted in the chronic cases.

6. Iothion.—Richartz describes iothion as an acid ester of iodine containing eighty per cent. of iodine which, when used percutaneously, is rapidly absorbed into the circulation. No dermatitis follows its use nor are unpleasant effects upon the stomach noted. Its use is indicated in cases in which preparations of iodine are not well tolerated by mouth.

ZENTRALBLATT FUER CHIRURGIE.

December 2, 1905.

1. A Typical Disease of the Tendon of Achilles, By A. SCHANZ.

1. A Typical Disease of the Tendon of Achilles.—Schanz describes a thickening of the tendon of Achilles which develops after overuse of the tendon. The swelling may be thick or thin and may vary as to the length of the tendon involved. The tendon itself is always the seat of pain. In this respect, as well as in the clinical aspects of the condition it differs from Albert's achillodynia in which the subachillic bursa is involved and is the seat of pain. The treatment consists in the application of an adhesive plaster bandage with the foot slightly flexed. The patient is allowed to walk, and in from two to three weeks is cured of the swelling and the pain.

ZENTRALBLATT FUER GYNÆKOLOGIE.

December 2, 1905.

1. The Technics of Pubiotomy, By W. PFELSTICKER.
2. Bier's Congestion Treatment in Gynecology, By J. EVERSMAHN.
3. Is Syphilis a More Severe Disease Than Gonorrhœa? By A. DOKTOR.
4. Puerperal Auto-Infection, By H. NATVIG.
5. An Obstetrical Speculum, By BLUMM.

2. Bier's Congestion Treatment.—Eversmann has constructed a glass specimen for this purpose, with which is connected a rubber tubing which can be adjusted to a syringe or air pump to secure the necessary vacuum. In cases of endometritis, the secretion is not only drawn from the uterus—more abundantly at first than later—and the hyperemia evoked aids in restoring the endometrium to its normal condition. The author also observed the disappearance of inflammatory bands in the posterior fornix. He also has had some success in the use of Bier's apparatus for dispelling a mastitis and for bringing about a more bountiful milk supply after labor. In gynecological work, the instrument is used on alternate days for about thirty minutes.

3. Syphilis and Gonorrhoea.—Doktor narrates a number of pathetic cases in which women were made chronic invalids and incapacitated from reproduction, by gonorrhoea acquired from their husbands. He admits the havoc caused by syphilis, but takes the position that gonorrhoea is the more of the two to be dreaded since it more frequently leads to chronic invalidism and death. Syphilis causes more misery and illness outside of the marriage relation, gonorrhoea in married life. Moreover, the syphilitic will have himself treated more thoroughly and energetically than the patient suffering from gonorrhoea.

ZENTRALBLATT FUER INNERE MEDIZIN.

December 2, 1905.

1. Medicinal Influence Upon Nephritic Albuminuria, By H. F. GRUENWALD.

1. Nephritic Albuminuria.—Gruenwald has found experimentally and clinically that doses of thirty grains of diuretin succeed in reducing the amount of albumin in some cases of nephritis, especially the parenchymatous forms. Smaller doses did not seem to have this effect. He is not yet prepared to say whether this result would follow in all cases systematically treated in this way. He assumes that the action of the diuretin is caused by an improvement in the blood supply of the renal epithelium and that this element is thereby better nourished.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE

November 26, 1905.

1. Action of Formic Acid and of the Formates Upon the Heart and the Circulation, By SPIRO LIVIERATO.

2. Percussion of the Sternal Region, By MICHELE LANGUET.

3. Stovaine as an Anæsthetic in Surgical Practice, By L. MARCHETTI.

4. My First Case of Accouchement Forcé with Bossi's Dilator, in a Woman with Albuminuria and Premature Detachment of the Placenta, By F. PARODI.

1. Action of Formic Acid on the Heart.—Livierato found that solutions of formic acid had a marked effect on the myocardium, proportionate to the concentration of the solution, in both man and animals. The effects consisted in the weakening of the systolic force, the slowing of the heart action, the onset of an irregular rhythm, and finally the arrest of the heart in diastole. Sodium formate has the same effect, save that at first and in small doses it stimulates the cardiac muscles and raises the arterial pressure. The formates should not be used as cardiac tonics, as some writers have suggested, until further researches reveal the various phases of their action.

4. Bossi's Dilator in Complicated Labors.—Parodi reports the case described in the title and advocates the use of Bossi's dilator in such emergencies as a prematurely detached placenta, or other conditions requiring forced labor. He thinks the instrument should form part of the equipment of every country practitioner.

RIFORMA MEDICA.

1. Clinical Contribution to the Study of the Surgical Treat-

2. A Case of Chyluria, By VINCENZO GIORDANO.

3. Varicose Veins in the Legs, By GUIDO TURAZZA.

4. The Patient's Position in Angina Pectoris (Concluded), By L. MINERVINI.

2. A Case of Chyluria due to Renal Tuberculosis.—Giordano reports an interesting case of chyluria, which depended not upon the presence of the filaria in the blood but upon a tuberculous nephritis, the explanation, revealed at the autopsy, being the presence of dilated lymph channels in the neighborhood of tuberculous ulcerative foci. The author summarizes the literature of the subject and tells us that chyluria may be due to a number of other causes besides filariasis. Among these are interstitial hepatitis, compression of the superior vena cava, or of the portal vein in the presence of peritoneal effusions; also, traumatism, cancer, syphilis and tuberculosis.

3. Varices in the Femoral Region.—Turazza reports a case in which the diagnosis of double inguinal hernia was made, and an operation for the radical cure thereof had been begun, when it was discovered that the swelling was due to a large varix occupying the position of such a hernia. The tumor had given every sign of hernia, including an impulse on coughing. The same condition existed on the other side. The varices were excised after ligating the veins which entered into them as there was always danger of rupture or of trauma as long as the swelling was allowed to remain. The author warns against similar errors, and urges operative treatment as a necessity in such cases.

4. Position of Patient in Differentiation Angina Pectoris.—Minervini contributes a most interesting study of the position of the patient in angina pectoris as an aid to differentiation from other attacks of pain and dyspnoea due to asthma, uræmia, etc. This characteristic position is in "retroversion." If the attack seizes him when he is standing he bends his body backward and raises his chin while his hands often instinctively seek to cover the heart; if a chair is near at hand, he sinks into it and his body is bent backward over the back of the chair, when in bed he sinks his head back into the pillows and slightly bends his trunk, so as to imitate, in a measure, the position of opisthotonos. Aside from this, the patient's head almost always is inclined away from the heart, i. e., to the right; and the upper part of his body forms an angle opening towards the right with the lower part. There are exceptions to this rule, such are however rare. To remember the posture, the author says it is sufficient to know that the patient "flees from his heart," i. e., assumes such a position that his heart is as far away from his head and his other organs, as possible.

ROUSSKY VRATCH

1. A Study of Double Malformations. Two Rare Cases of Double Anomalies in Embryo Chicks,

2. Exstrophy of the Bladder, By P. A. BARATYNSKI.

3. The Treatment of Alcoholism, By TH. E. RYBAKOFF.

4. Case of Metastatic Cancer of the Skin of the Abdomen, in Connection with the Study of the Structure and Proliferation of the Nuclei of Cancer Cells, By TH. Z. OMELTCHENKO.

3. Treatment of Alcoholics.—Rybakoff contributes a study of the methods of treating alcoholism systematically, as should be done by the state. He concludes that the ambulatory method, i. e., the establishment of numerous dispensaries where alcoholism can be treated in a large number of the population, is the most practical method for a country like Russia where economic conditions do not permit the establishment

of numerous special asylums for inebriates. Such asylums conducted by the state would be the ideal measure against the spread of alcoholism. The best method of treatment, he thinks, is undoubtedly by means of hypnotic influence, and the séances should be held daily at first and later several times a week. Medical supervision should be continued in each case for a year if possible. Asylums for inebriates should also be maintained for specially resistant cases and for dangerous drunkards. Lectures and libraries should be part of the dispensaries for alcoholics, and the education of the masses in the evils of alcoholism should be promoted in these institutions. Nothing compulsory should be tolerated, but attempts should be made to improve the social, economic and hygienic condition of the people. (The article is one characteristic of the present state of affairs in Russia. The use of hypnotism in the treatment of inebriety which is so prevalent in that country is getting to be very popular in Russia among the physicians in charge of dispensaries.)

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

December, 1905.

1. Xanthelasma and Chronic Jaundice, By T. B. FUTCHER.
2. The Nature and the Lesions of Cirrhosis of the Liver, with Special Reference to the Regeneration and Rearrangement of the Liver Parenchyma, By A. O. J. KELLY.
3. A Case of Congenital Hepatoptosis Showing a Mesohepar, By T. W. CLARKE and D. H. DOLLEY.
4. Chronic Parenchymatous Nephritis, Acute General Infection, Infarction of the Lung, Double Phlebitis, Nephrolithiasis, Partial Recovery, By C. B. GAMBLE, JR.
5. Fatal Obliterating Endophlebitis of the Hepatic Veins, By A. F. HESS.
6. A Case of Excision of the Head of the Humerus for Congenital Subacromial Dislocation of the Humerus, By J. B. ROBERTS.
7. Volvulus of the Cæcum and Ascending Colon, By A. C. WOOD.
8. Further Observations on the Relation of Lesions of the Gasserian and Posterior Root Ganglia to Herpes Occurring in Pneumonia and Cerebrospinal Meningitis, By W. T. HOWARD, JR.
9. A Case of Syringomyelia with Double Optic Neuritis, By T. H. WEISENBURG and J. THORINGTON.
10. Chronic Anterior Poliomyelitis, with the Report of a Case with Necropsy, By G. A. MOLEEN and W. G. SPILLER.
11. Myoclonus Multiplex, with Report of a Case, By D. HECHT.
12. Infectious Arthritis, a Bacteriological Contribution to the Differentiation of the "Rheumatic" Affections, By R. FAYERWEATHER.
13. A Fatal Case of Stokes-Adams Disease, with Autopsy Showing Involvement of the Auriculoventricular Bundle of His, By A. STENGEL.

1. **Xanthelasma and Chronic Jaundice.**—Futcher reports three cases in women, the jaundice preceding the xanthomata by long periods. Gallstones caused by the jaundice in two cases and hypertrophic cirrhosis of the liver in the third. The xanthomata were chiefly plaques, but there were a few nodes; in one there were xanthomata of the gums and in one of the mucous membranes of the bile ducts. Two of the cases were operated upon and one came to autopsy, so that the cause was definitely determined. Four fifths of the cases of xanthoma multiplex in adults are associated with chronic jaundice, the eyelids being most frequently attacked at the onset. Causes for the jaundice are gallstones, stricture of the bile ducts, atrophic and hypertrophic cirrhosis of the liver, hydatids and cancer. The indications are to relieve the underlying process by surgical means.

2. **Cirrhosis of the Liver.**—Kelly thinks the most noteworthy fact in the study of cirrhosis is the com-

plete rearrangement of the architecture of the liver parenchyma. Some liver lobules are entirely destroyed while there are positive evidences of regeneration and hyperplasia of liver cells. The only apparent difference between the new lobules and normal liver tissue is in the arrangement of the cells and the relation of the capillaries and central veins. This arrangement of cells and lobules is followed by fibrosis which contracts and atrophies the liver cells and obstructs and obliterates certain interlobular and intralobular branches of the portal vein.

3. **Congenital Hepatoptosis.**—Clarke and Dolley conclude from the study of their case, as follows: The abnormal position of the liver, limited mobility, atypical shape, absence of coronary and right ligaments, abnormal origin of left lateral ligament, shifting of the fissure of the vena cava from one lobe to the other leave no doubt as to the embryonic origin of the condition. It proves Meissner's hypothesis that a mesohepar may exist.

4. **Chronic Parenchymatous Nephritis.**—Gamble finds in the complicated history of this case, with other experience, that there is great uncertainty and wide variation in the course of kidney cases. Drugs, in this case, had no appreciable effect, the same being true of diet, though the exclusion of salt from the food influenced the condition of œdema favorably. The Edebohls operation was performed, but its usefulness if any consisted in relieving tension at the time. Venesection acted well as a diuretic, but produced no permanent result.

5. **Fatal Obliterating Endophlebitis of the Hepatic Veins.**—Hess admits that no case of this disease has ever been correctly determined during life. It has the ascites with dilated abdominal veins, slight or no icterus, a palpable liver and spleen but there is absence of any cause for cirrhosis, which also, unlike this disease, occurs in middle life or later. There is also pain over the hepatic area, which is exceptional in cirrhosis. The swelling and ascites in endophlebitis develop very rapidly, but in cirrhosis very slowly.

12. **Infectious Arthritis.**—Fayerweather thinks that the bacteriological studies relating to acute articular rheumatism thus far point to a varied bacterial origin. The micrococcus rheumaticus of English observers has been effectually criticised. Bacteriologically, there is no evidence to show that there is any essential difference between acute articular rheumatism and infectious polyarthritis chronica villosa. The difference in the clinical course of the two diseases is probably due to differences in the infecting organisms and in the degree of disturbance which they cause.

THE PRACTITIONER.

December, 1905.

1. The Thymus Gland, By T. G. MOORHEAD.
2. Some Tumors of the Breast, By W. H. C. GREENE.
3. Notes on the Diagnosis of Pernicious Anæmia, By W. D. EMERY.
4. The Diagnostic Value of the Leucocyte, By O. F. F. GRÜNBAUM.
5. The Treatment of Scars and Cheloid, By M. MORRIS.
6. The Pathology of Dropsy, By F. A. BAINBRIDGE.
7. Remarks on Renal Traumatism, By C. G. CUMSTON.
8. Review of the Diseases of the Respiratory Tract, By J. J. PERKINS.
9. The Treatment of Crushed Hands, By A. J. FAIRLIE CLARKE.
10. Uric Acid and Dirt, By F. C. EVE.
11. Hæmophilia, By J. J. WILSON.
12. The Treatment of Venereal Diseases in the Services, By Major F. J. W. PORTER.
13. The Value of Haffkine's Prophylactic in Plague, By W. J. SIMPSON.

1. **The Thymus Gland.**—Moorhead states that the thymus gland retains its relative weight until the period of puberty and then begins to degenerate. Ex-

periments with rabbits were made by him to test the effects of thymus extracts upon blood pressure. 1. An alcoholic extract from human glands caused an immediate slight depressor effect upon blood pressure with irregularity of respiration, and of the heart. 2. An alcoholic extract of lamb's thymus caused a primary slight rise followed by a more prolonged and pronounced fall in the blood pressure. 3. A saline extract of human glands, precipitated by alcohol, had a slight depressor effect, with temporary cessation of respiration, also increased force and irregularity of the heart action. 4. A similar extract from lamb's thymus caused only temporary cessation of respiration and had no effect upon blood pressure. A study of the literature of extirpation of the thymus showed that the gland exerts an influence upon nutrition and upon hæmopoiesis, this conclusion being supported by pathology. Experimental use of thymotoxic sera showed that the importance of the hæmopoietic and other functions of the gland in extra uterine life was not very great. Of the many pathological changes to which the gland is subject two are noteworthy, (1) its atrophy is constantly found associated with marasmic conditions in children, (2) great hypertrophy of the gland is found in Hodgkin's disease, leucæmia, Graves's disease, acromegaly, thymic asthma, and myasthenia gravis.

2. **Some Tumors of the Breast.**—Greene, in a study of eight cases, found it difficult to differentiate clinically between benign and malignant growths, and thinks there are no means, apart from the microscope which is also sometimes misleading, which will enable us to diagnosticate malignancy at an early date. All tumors of the breast must be regarded with great suspicion, whether hard or soft, solid or fluid.

3. **Notes on the Diagnosis of Pernicious Anaemia.**—Emery recommends the following method of making a diagnosis from the blood. The color index is to be determined, the red corpuscles counted, and observation made as to whether any are larger than one third the diameter of the half square on the counting chamber. If the index is high a leucocyte count must be made, if low a differential count on a stained film, noting nucleated, polychromatophil, or punctate forms. If there is relative lymphocytosis the diagnosis is probable and the films should be examined for megalocytes. There should then be a careful search for nucleated red corpuscles, but if previous signs are positive a diagnosis may be safely made without their discovery. A wet, undiluted specimen may be examined for porkilocytosis and rouleaux formation.

5. **The Treatment of Scars and Cheloid.**—Morris recommends the Finsen light for this purpose. It produces local reaction with destruction and absorption but the dosage must be accurately adapted to each case. For scars that seem almost hopeless it is superior to any other known treatment.

6. **The Pathology of Dropsy.**—Bainbridge sums up the etiological facts as follows: 1. A small output of urine. In chronic nephritis the onset of cardiac hypertrophy, and increased flow of urine are often accompanied with diminution of dropsy. 2. The retention of sodium chloride and other salts, which means retention of water as well. 3. Increased katabolism in the muscles, owing to loss of control over muscular metabolism by the kidneys. This means accumulation of waste products in the muscles and tissue spaces which, by osmosis, favors oedema.

7. **Remarks on Renal Traumatism.**—Cumston remarks the increasing frequency of these injuries. If the injury is severe there may be shock, vomiting, weak heart action, and even complete coma. There may be no external marks of injury, but there will be tenderness on palpitation and possibly more or less of a tumor. Abscess may result. The author advises a

conservative course of treatment if an immediate operation is not indicated.

EDINBURGH MEDICAL JOURNAL.

1. The Clinical and Pathological Importance of Chronic Pancreatitis, By A. W. MAYO ROBSON.
2. Heredity, By J. A. THOMSON.
3. The Tuberculosis Problem as Affected by the International Congress on Tuberculosis, held at Paris, October, 1905, By R. W. PHILIP.
4. On Psychochromæsthesia and Certain Synæsthesiæ, By J. A. THOMSON.
5. Notes on the Injuries to the Two Hull Fishermen Killed and Others Injured on Board the Steamer *Trawler Crane* in the North Sea, October 22, 1904, by Shots Fired from Vessels of the Russian Fleet, By J. A. THOMSON.

1. **The Clinical and Pathological Importance of Chronic Pancreatitis.**—Robson states that a pancreas which is the subject of chronic inflammation is swollen and hard, and feels like a wax cast. Pathological changes may originate in any of its parts, and according to the structures primarily affected and the nature of the change will the effects on its anatomy and function vary. The disease may be divided histologically into (1) chronic interstitial interlobular pancreatitis, (2) chronic interstitial interacinar pancreatitis, (3) cirrhosis of the pancreas. The association of this disease with gallstones is frequent, and its reason is obvious from the anatomical relations of the duct and the pancreas. The disease may be associated with duodenal catarrh, typhoid fever, cirrhosis of the liver, influenza, or gastric ulcer. In the differential diagnosis one must consider cancer of the head of the pancreas, of the common bile duct, of the liver, gallstones in the common duct, and chronic catarrh of the bile ducts. The prognosis of this disease when surgically treated is favorable if operation is not too long delayed. Of 102 cases in which the author has operated, there have been but four deaths, and the permanent results have been very gratifying.

2. **Heredity.**—Thomson gives an interesting critic of Archdall Reid's Principles of Heredity with Some Applications, and the following is the conclusion: The subject of heredity should now engage the attention of thinking people, especially physicians, who should possess a knowledge of it as a portion of their ordinary equipment. He believes that it includes a great field of knowledge in which biology and political history meet, and that it is the task and the duty to gather the harvest and apply it for the benefit of mankind.

REVUE DE CHIRURGIE.

1. Simple and Aseptic Surgical Technique, By D. P. ALLEN.
2. Branchial Cysts of the Neck, with Structure Similar to That of the Tonsils, By F. TERRIER and P. LECÉNE.
3. Osteopsathyrosis or Essential Fragility of the Bones, By A. BROCA and HERBINET.
4. Blepharoplasty by a Modification of the Italian Method, By F. LAGRANGE.

2. **Branchial Cysts of the Neck.**—Terrier and Lecéne affirm that ganglionic cysts of the neck do not exist, but that there are congenital branchial cysts, the wall of which presents the same conditions of structure as the tonsil. They are covered with stratified pavement epithelium, without a horny layer, which rests upon a more or less thick layer of lymphoid tissue, and may or may not contain closed follicles. These cannot be called dermoid branchial cysts, for they do not present a structure similar to that of the skin, nor should they be called mucoid cysts, for that would confuse them with cysts of the thyroglossal canal, which often contain a viscid fluid. If they are termed amygdaloid it suggests the structure of their wall and their probable origin. In all probability they are developed from the

entodermic wall of the second branchial pouch, the ectodermic wall of which gives rise to true dermoid cysts of the lateral region of the neck.

3. **Osteopsathyrosis.**—Broca and Herbinet do not mean by this term either osteomalacia or rhachitis, the bones being as brittle as glass and without incurvation. It is due to some particular constitutional change, neither that of syphilis, scrofula, nor gout, but its exact nature they do not know. The authors believe that it has a congenital causation, but that its prognosis is not bad, as a cure will result in the course of time. As to the fractures which occur with the slightest provocation they are repaired with neither excess nor deficiency of callus, without deformity or pseudarthrosis. Union usually occurs as rapidly as in any ordinary condition. The constitutional treatment must be empirical, but there can be no harm in administering such substances as tend to strengthen the bony system, such as phosphate of lime, cod liver oil, and thyroid extract.

ARCHIVES OF PÆDIATRICS.

November, 1905.

1. Case of Sepsis in a Newly Born Infant, By A. JACOBI.
2. Chronic Constipation in Children, By H. B. SHEFFIELD.
3. Myotonia Congenita or Thomsen's Disease, By F. S. MEARA.
4. The Ætiology of Noma, By C. HERRMAN.
5. Note on a Series of Cases of Stomatitis, By H. H. JENKS.

1. **Case of Sepsis in a Newly Born Child.**—Jacobi notes the following points of unusual interest: 1. Uric acid was discharged in large quantities from the fourth to the eighth day, also from the ninth to the tenth. Hematuria in this case was not caused by foreign bodies. 2. Almost every floating kidney found in early life is congenital. The increase in size of the left kidney in this case was not due to dislodgement. 3. The diagnosis of intraabdominal tumors in infants and children should be deferred until it is positive. 4. The bacterial cause and mode of invasion in this case are unknown. Amniotic fluid, maternal milk, and lochia are excluded. The skin experienced many changes, the lips were sore, the umbilical stump was sore and bleeding. The cord did not fall off until the fourteenth day, and sepsis may have entered by this avenue.

2. **Chronic Constipation in Children.**—Sheffield calls attention to a class of cases on which any and all forms of treatment result merely in improvement, but not in permanent cure. Massage, oil enemas, and hydrotherapy should be used simultaneously. The indiscriminate use of antispasmodics and soothing laxatives is to be deprecated. The following remedies are harmless and often efficient, soap and glycerin suppositories, cacao butter suppositories with aloin, belladonna and tincture of nux vomica, calcined magnesia, magnesia and rhubarb, compound licorice powder, castor oil, cascara sagrada, calomel followed by a saline exodion, and the standard mineral salts, or waters. Whatever the form of therapy, a habit of regular stools should be established.

4. **The Ætiology of Noma.**—Herrmann draws the following conclusions: 1. The spirochæta of necrosis is the microorganism of greatest importance in causing noma. 2. It is identical with that which is found in the ulceromembranous lesions of the mouth, the spirillum sputigenum and spirochæta dentium of Miller. 3. Though apparently two organisms, they are but one in different stages of development and belong to a connecting link between the bacteria and the lowest forms of animal life. Hence, they cannot be stained and grown on culture media by usual methods. 4. They are in the atmosphere in the form of resistant spores and are deposited on food, water, etc., and then taken into the body. 5. They do not develop well in

the human body, hence noma is not very contagious. 6. Ulcerative and gangrenous stomatitis are different stages of the same process. 7. Diseased teeth have an important share in causing ulcerative and gangrenous stomatitis. Hence in the infectious diseases of childhood diseased teeth should be removed. 8. Treatment should consist in the careful use of the Paquelin cautery.

AMERICAN JOURNAL OF OBSTETRICS

December, 1905.

1. Fundamental Principles of Immunity, By H. T. RICKETTS.
2. The Bacteriology of the Puerperal Uterus, By H. M. LITTLE.
3. A Case of Congenital Heart Disease. Transposition of the Aorta and Pulmonary Artery. Patent Foramen Ovale and Ductus Arteriosus, By A. G. ELLIS.
4. Hysterectomy for Fibroids of the Uterus. With a Report of 250 Operations, By J. B. DEAVER.
5. Congenital Fœtal Cysts of the Neck Obstructing Labor, By F. J. TAUSSIG.
6. Hæmorrhages in Ectopic Pregnancies, By T. J. WATKINS.
7. The Hæmorrhage of Placenta Prævia, By A. McDERMID.
8. A Case of Sarcomatous Degeneration of a Fibroid Tumor of the Uterus with Repeated Hæmorrhages Into the Tumor, By T. A. ERCK.

1. **Fundamental Principles of Immunity.**—Ricketts outlines the work which has developed upon this subject, dwelling especially upon the theories of Ehrlich and Metchnikoff. He regards the following as the important factors which influence the success of antitoxic therapy: 1. The degree of affinity which exists between the toxine and its antitoxine. 2. The degree of affinity between the toxine and the cells of the body. 3. The functional importance of the tissues which are involved. 4. The date of administration of the antitoxine in relation to the time of infection rather than in relation to the onset of symptoms. 5. The administration of sufficiently large doses of antitoxine, for only large doses are able to dissociate the union which has occurred between toxine and cells.

2. **Bacteriology of the Puerperal Uterus.**—Little arrives at the following conclusions: 1. In fifty consecutive women whose lochia were examined immediately after labor, and on the third and seventh days of the puerperium, the uterus was absolutely sterile in 92, 50, and 44 per cent. of the cases, respectively. 2. Counting as negative the cases in which gonococci were present the figures are 96, 72, and 67 per cent. 3. The puerperium was normal in forty and febrile in ten cases. In the former the percentages of absolute sterility were 92.5, 62.5, and 50 per cent., as compared with 90, 40, and 20 per cent. of the latter; or counting the gonorrhœal cases as negative, the figures are 95, 85, and 70 per cent., and 100, 50, and 50 per cent., respectively. 4. The streptococcus was found only once, in a febrile case on the third day, but it was absent on the first and seventh days.

3. **Congenital Heart Disease.**—Ellis concludes from the study of this case that transposition of the great vessels is incompatible with more than a short period of existence. Only five cases recorded by Peacock passed the first year, and only nine exceeded six months. Defect in the interventricular septum accompanying transposition is favorable to the prolongation of life. Patent foramen ovale alone may exert no influence whatever upon the length of life of the individual. Persistent ductus arteriosus is so rarely the only anomaly that it may be regarded as a subordinate lesion. It is improbable that it has any appreciable influence upon the duration of life. Such lesions as cyanosis, polycythemia, and clubbed digits are common to practically all forms of congenital heart disease.

4. Hysterectomy for Fibroids of the Uterus.—Deaver does not regard fibroid disease of the uterus as so serious a disease as do many writers. He thinks that not more than eight per cent. of those who have this disease suffer death directly from this cause, and he concludes that operative measures should not be recommended injudiciously. In the palliative treatment of this disease the condition of the heart, kidneys, and intestine are especially to be considered. Myocarditis and arteriosclerosis are frequently associated with it, and are often responsible for the fatal issue of an operation. Electricity is useless as a means of treatment. Curettage will sometimes arrest hæmorrhage and delay the development of the disease. Intrauterine medication is condemned as injurious. One or both ovaries should be retained if possible, and the appendix should not be removed unless its removal is distinctly indicated. The supravaginal operation is preferred to the complete removal of the organ.

5. Congenital Foetal Cysts of the Neck Obstructing Labor.—Taussig differentiates the following varieties: 1. A form of occipital meningocele, or spina bifida of the cervical vertebræ. 2. Branchial cysts, and sublingual dermoid cysts. 3. True blood cysts of uncertain origin. 4. Cystic enlargement of the thyroid. 5. Hygroma, or congenital lymphangioma. With regard to the treatment of these tumors the author advises waiting for a time, especially if there are no symptoms, as a spontaneous cure may result. Should this not be the case the tumor should be removed.

7. The Hæmorrhage of Placenta Prævia.—McDermid thinks an abortion should be induced, and the uterus emptied if the diagnosis can be established in the early months of pregnancy. The use of the vaginal tampon is recommended to control the hæmorrhage, and for delivery the Braxton-Hicks method of combined version is approved. Detachment of a portion of the placenta may be followed by alarming hæmorrhage, and the head should be brought down with forceps as quickly as possible to obtain the advantage of its pressure, subsequent delivery being dependent upon the urgency of the conditions. Cæsarean section may sometimes be the proper method of procedure for this condition, but never the vaginal Cæsarean section.

REVUE DE MEDECINE.

1. The Epigastric Point in Pulmonary Emphysema and in the Cardiopathies, By H. DE BUEN.
2. Contribution to the Study of Massive Cancer of the Liver, By H. GERARD.
3. Epileptiform Crises of Pleural Origin, By M. ROCH.

1. The Epigastric Point in Pulmonary Emphysema and in the Cardiopathies.—De Buen has found this symptom a common one. It is usually located in the immediate vicinity of the xiphoid cartilage. Pressure upon the epigastrium increases the pain and sometimes makes it intolerable. It is frequently an early subjective phenomenon in pulmonary emphysema, and was seen in five sevenths of a series of cases of that disease. The pain in question is not necessarily associated with arteriosclerosis, though it sometimes is. It is believed that it is due to some morbid condition in the right ventricle of the heart. It is of little prognostic importance in pulmonary emphysema since it is merely a symptom of the initial condition of the disease. But in connection with initial lesions it is often a precursor or one of the phenomena of asystole, and is therefore of great prognostic importance in this disease.

3. Epileptiform Crises of Pleural Origin.—Roch believes that he has observed in pleurisy the power of not only favoring the production of epileptiform crises of whatsoever origin, but of exciting them directly, the mechanism of this action being a reflex phenomenon. The author supports his opinion by the re-

ports of cases but recognizes that he requires the concurrent testimony of others. His method of reasoning is based upon four clinical cases with positive peculiarities. The interpretation which he has given to these cases is supported by the possibility that reflex convulsions may be of pleural origin, as in pleuritic eclampsia which follows the bringing on of labor, and on the other hand by the frequency of reflex nervous disorders in those who suffer with pleurisy, independent of all operative traumatism, for example cough, sudden death, hemiplegia, etc. It therefore seems proper to add to the list of causes of epileptiform convulsions, inflammatory irritation of the pleura, aside from traumatic irritation of the pleura.

AMERICAN JOURNAL OF SURGERY.

1. Plaster of Paris and How to Use It, By M. W. WARE.
2. Nerve Blocking to Prevent Amputation Shock. Illustrative Reports of Two Thigh Amputations, By G. F. LYDSTON.
3. Some of the Fallacies of the Clinical Diagnosis of Gonorrhœa, By G. F. LYDSTON.
4. The Radical Cure of Chronic Nasal Suppuration. Report of a Case, By A. P. VOISLAWSKY.
5. Umbilical Cord Hernia, By M. M. MORAN.
6. Bartholinitis. Its Radical Cure by a Simple Measure, By A. E. GALLANT.
7. Carcinoma of the Male Breast. Report of a Case, By W. KRUSEN.
8. Cervical Rib. Report of a Case, By L. HANSWIRTH.
9. A Case of Mastoiditis, Epidural Abscess, and Obliterating Sigmoid Sinus Phlebitis, By L. M. HURD.

2. Nerve Blocking.—Gessner describes his practice upon the recommendations of Cushing and Crile in reference to the nerve blocking effect of cocaine and endorses the propositions of Cushing as follows: 1. Shock signifies peculiar depression of the normal activities of the central nervous system, and usually results from traumatism to peripheral afferent nerves. The impulse from this traumatism acts reflexly upon the vasomotor center in the medulla and causes diminution of arterial tension which is the most characteristic symptom of shock. 2. Injuries of moderate severity to peripheral nerves usually cause increase of blood pressure. But if they are extensive, frequently repeated, or complicated with anæmia, shock will result with fall in blood pressure. Shock may be obviated by perfect hæmostasis, but cannot ordinarily be avoided when many sensory nerve trunks are divided. There is, therefore, great risk in dividing these nerves when there has been loss of blood, prolonged anæsthesia, or a condition of shock already existing. 3. Cocaine injected into a nerve trunk blocks the transmission of sensory impulses. Cocainization of main trunks, central to the proposed site of their division in a major amputation, therefore, prevents the transmission of impulses which might become the chief factors in producing shock.

3. Some of the Fallacies of the Clinical Diagnosis of Gonorrhœa.—Lydston thinks there are no tests which will enable us often to give a positive opinion of the infectiousness of a given case of suspected latent gonorrhœa. The clinical history is often of more importance than the laboratory study of the case and a careful combination of both methods of study is essential. An arbitrary opinion is unjustifiable in a large proportion of cases. The author believes that a physician should be as chary of assuming responsibility in advising a sufferer from gonorrhœa concerning marriage as he would be in advising a syphilitic under similar circumstances.

6. Bartholinitis.—Gallant considers two forms of this disease. In the first form occlusion of the duct results in painful distension of the gland interfering with walking and demanding prompt relief. This may be given by excising, under cocaine anæsthesia, an el-

lipse of mucous membrane and gland wall equal to at least one third the area of the sac, and covering the wound with a sterile dressing for a week or ten days. In the second form the gland is infected, the duct is forced open and the products of inflammation constantly drain away with pruritus and dyspareunia. Excision of the gland will be required unless the case has been treated successfully during the stage when obstruction of the duct has caused distension of the gland.

INTERNATIONAL JOURNAL OF SURGERY.

December, 1905.

1. A Surgical Clinic, By J. D. BRYANT.
2. The Conservative Treatment of Enlarged Prostate, By H. M. CHRISTIAN.
3. Immediate Detection of Injuries of the Birth Canal Resulting from Childbirth, By J. E. DAVIS.
4. The Imperative Treatment of Urinary Retention, By J. B. BISSELL.
5. Some Observations on Appendicitis, By L. SEXTON.
6. Treatment of Transverse Presentations, with Report of a Case, By J. R. HICKS.
7. Enucleation or Removal of the Eye Following Injuries. When Should This Operation Be Performed? A Plea for Conservatism, By J. A. WHITE.
8. First Aid to the Injured Eye, By M. F. COOMES.

2. **The Conservative Treatment of Enlarged Prostate.**—Christian thinks that operative procedure should be reserved for the following: 1. Cases in which there is partial or complete retention and in which it is not possible to give the catheter a proper trial. 2. Cases of partial retention in which the catheter may be required two or three times daily, and in which there are frequently recurring attacks of acute retention. 3. Cases of complete retention with chronic cystitis and dependence upon catheter. 4. Cases in which catheterization is difficult or painful or causes hæmorrhage from the posterior urethra and vesical neck. Catheter life should be instituted when the residual urine amounts to three ounces, and requires particular attention to three points, the selection and sterilization of the instrument and the instruction of the patient in its use.

4. **The Imperative Treatment of Urinary Retention.**—Bissell emphasizes the value of suprapubic aspiration in this condition for the following reasons: 1. It affords almost instant relief in a serious condition. 2. It may be absolutely indicated, and there is then no alternative for it. 3. It is harmless when skillfully performed, and is always available. 4. It can be employed for days, if necessary, without danger, and with little or no pain. 5. It is a valuable preparatory measure for the major operation.

CHIRURGIA.

Vol. XVIII, No. 106, 1905.

1. High Origin and Superficial Position of the Dorsal Branch of the Radial Artery, By I. V. GEORGIEFSKI.
2. Radical Operation for Congenital Cephaloma, By E. IPMICHILLOFSKI.
3. Sarcoma of the Cranium, By I. F. GOUSSEFF.
4. Osteoplastic Craniotomy, By I. DZIRNE.
5. Radical Operation for Disease of the Frontal Sinus, By A. IVANOFF.
6. Exposure of the Deep Branch of the Radial Nerve for the Repair of Injuries, By G. VOLYNTZEFF.

3. **Sarcoma of the Cranium.**—Gousseff reports a case of sarcoma of the cranium in a Chinaman, aged fifty years. The growth had appeared five years previously, had increased rapidly in size and had recurred after having been removed. The patient suffered no pain, but complained of vertigo. The growth was hard, nodular, and ulcerated, and occupied almost the entire upper lateral and posterior surfaces of the skull. It was carefully removed and the periosteum was resected over the surface of the affected parts. Excrescences had penetrated into the bony covering of the vault of the skull.

Proceedings of Societies.

SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

Eighteenth Annual Meeting, held in Louisville, December 12, 13, and 14, 1905.

The President, Dr. LEWIS C. BOSHER, of Richmond, in the chair.

The Surgical Repair of Injured Nerves.—Dr. J. SHELTON HORSLEY, of Richmond, reviewed the work of recent investigators on the histological regeneration of nerves. He alluded to the views of those who maintained that regeneration of a peripheral nerve could take place without central connection. He classified the surgical methods of repair as follows: 1. Simple nerve suture, including all cases where the ends of the nerve were brought into direct contact and sutured, even when nerve stretching or resection might be necessary. 2. Flap operations, which were usually unsatisfactory. 3. Nerve bridging. By this term was meant bridging over the defect with foreign material. This included not only transplantation of nerve tissue from lower animals, but also *suture à distance*. 4. Nerve implantation, or anastomosis. Under this head were included those cases in which the ends of an injured nerve were implanted into a healthy nerve.

He reported a case falling under the last classification. The patient had suffered an injury as a result of which the upper part of the median nerve had been destroyed for two inches and a half and the musculospiral injured in the lower part of the arm, with paralysis of all the muscles of the hand and forearm except those supplied by the ulnar. Three months after this the median was implanted laterally into the ulnar. Fourteen months later both flexion and extension had returned to a marked degree. At that time the musculospiral was cut across and implanted laterally into the median. Ten months after the second operation sensation and motion of the hand and forearm had almost completely returned.

Dr. CHARLES H. MAYO, of Rochester, Minn., said that one question that interested him more especially was the difference in the capability of repair of a sensory nerve and that of a motor nerve.

Foreign Bodies in the Oesophagus.—Dr. STUART MCGUIRE, of Richmond, said that the diagnosis of foreign bodies in the oesophagus was based on the history of the case, external palpation of the neck, the passage of an oesophageal bougie, and the use of the x ray. If the body was round or smooth, efforts should be made to extract it with forceps and probangs, or to make the patient eject it by swallowing masses of partially masticated food and then vomiting. If it was small, it might seem wise to endeavor to push it into the stomach. None of these expedients should be tried when the foreign body was pointed, sharp, or angular. Under modern surgical technique, an open operation was the safest procedure. There were two means of approach, one by an external oesophagotomy, the other by gastrotomy, and the selection of the method would depend on the situation of the impaction. If it was opposite the cricoid cartilage, oesophagotomy should be done; if it was below the level of the supraclavicular notch, gastrotomy should be performed.

Dr. J. WESLEY LONG, of Greensboro, narrated the case of an infant who had swallowed an open safety pin; the pin lodged in the oesophagus opposite the cricoid cartilage. A radiograph, however, showed that the point of the pin was below the arch of the aorta. It produced constriction of the oesophagus where the left bronchus crossed it, and the pin was removed by external oesophagotomy without any shock. He

thought there were some cases in which this operation was preferable to gastrostomy.

Dr. W. S. GOLDSMITH, of Atlanta, mentioned the case of a patient who had swallowed the concave part of a dental plate, which lodged in the œsophagus and was retained there for a period of four months. At the end of this time the patient was very much emaciated and weak. Efforts were made to extract it with forceps, but this could not be done. It then occurred to him to try Bull's method of attaching a series of sponges to a long silk ligature and, using an œsophageal bougie, passing it out through the mouth and leaving in position the series of sponges. After attaching the bougie, it was a simple matter by a few sweeping movements backward and forward to push the foreign body into the stomach and extract it through the gastrostomy opening.

Dr. H. A. ROYSTER, of Raleigh, reported the case of a child, two years of age, who, two weeks previously to his seeing the case, had swallowed the wheel of a tin toy wagon. The child was able to swallow liquids, but not solids. During this time it subsisted on milk and liquid food. He used a medium sized, shotted semielastic bougie for the purpose of an examination; this passed into the œsophagus, with some resistance, after which he was enabled to pass it farther without obstruction apparently. After applying a mouth gag he was enabled to extract the foreign body with an œsophageal forceps. It lay transversely.

Dr. HORSLEY said if a foreign body could not be removed by ordinary means, no time should be lost in resorting to an operation. He reported the case of a child who had swallowed a camel from a grab bag. He saw the child on the fourth day, did œsophagotomy, and removed the foreign body with comparative ease. The œsophagus was injured and gangrenous. Septic symptoms developed, and the child died on the fourth day following the removal of the foreign body. He thought the child's life might have been saved by an earlier operation.

Dr. CHARLES M. ROSSER, of Dallas, Texas, reported two cases of foreign bodies in the œsophagus. In one, the foreign body, an ordinary pin, could not be removed by ordinary means. Two thirds of the pin was buried, but with the aid of the fluoroscope the pin was caught by its head and with forceps extracted. In the other case a nickel was lodged within two or three inches of the cardiac end of the œsophagus. Gastrotomy was performed, and the foreign body extracted. The child lived about six or eight hours, and then died, apparently without shock.

Dr. RUFUS B. HALL, of Cincinnati, reported the case of a child of a physician, five months old, who swallowed a safety pin an inch and a half long. It remained in the œsophagus for a time, but at the end of twenty-four or thirty-six hours the symptoms caused by its presence disappeared. The child was able to take the breast and thrived well. An x ray picture was taken which disclosed an open safety pin in the pyloric end of the stomach. The parents declined an operation for its removal until unfavorable symptoms developed. Several x ray pictures were taken; but the child did not have any unfavorable symptoms referable to the presence of the safety pin. When the child was twenty-six months old, it passed the pin by the natural route. The child was now seven years of age.

Dr. W. D. HAGGARD, of Nashville, related the case of a child, eighteen months old, who swallowed a pin, the head of which was as large as a cherry stone. The child had cough, and the presumption was that the pin had lodged in a bronchus. An x ray picture gave very little information in regard to the presence of the foreign body. The pin appeared to be in a bronchus, with its head down and to the left. The child had lit-

tle or no pulmonary symptoms. After a number of days the child passed the pin by the natural route.

Dr. MCGUIRE said that no hard and fast rules could be laid down as to whether œsophagotomy or gastrostomy should be done in a given case. Of the two operations, he preferred gastrostomy. It seemed easier and the after treatment was simple. If it was equally applicable, it was the method to be adopted.

Gallstones in the Cystic Duct.—Dr. L. H. DUNNING, of Indianapolis, presented a method which he had employed in one case which greatly facilitated the pressing backward into the gallbladder of a stone impacted in the cystic duct. In this case the gallstone was lodged in the cystic duct in front of a small stricture. After making all the efforts he deemed prudent to press the stone backward into the gallbladder without success, he unsuccessfully attempted to dilate the stricture with the finger tips and later with forceps. One of his assistants suggested that he thought they could better dilate with the forceps if they could see the stricture. The walls of the gallbladder were elastic. The liver had been turned upward, so that the gallbladder was near the surface. The opening in the gallbladder through which he had been working was enlarged a little, and then the stone was steadied and held against the stricture by an assistant. The fundus of the gallbladder was pushed forward toward the strictured entrance into the cystic duct. They so far succeeded as to bring the opening in the wall of the gallbladder directly opposite the strictured opening. They then tried to introduce the forceps tips, but failed. The points of a pair of probe pointed scissors curved on the flat were gently worked through the fistula and the scissors opened; this did not dilate the opening sufficiently, so the edge of the fistulous ring was snipped slightly in two or three places, when they were able to dilate the fistula so as to permit of the easy exit of the stone. The operation was completed in the usual way. A rubber tube was fastened in the gallbladder and that viscus anchored to the fascia. Before they had finished the operation a little bile had flowed into the gallbladder. Two or three ounces of bile were discharged from the tube daily; at first it was dark and thick, but gradually approached the normal color and consistence. The patient made an uneventful recovery, and had but little further pain or soreness in the gallbladder region. He thought the procedure adopted in this case might be found of service in others. It was not applicable to cases in which the gallbladder could not be brought near the surface, or where it was thickened by inflammatory deposits.

Common Duct Obstruction.—Dr. J. WESLEY LONG, of Greensboro, N. C., stated that, as compared with gallstones in the gallbladder, the condition was many times more serious. He quoted these as yet unpublished statistics of the Mayo clinic, where there had been more gallstone operations done than in any other clinic in the world, showing that in simple gallstones in the gallbladder the mortality of an operation was less than one half of one per cent., while the mortality in operations for common duct obstruction ranged from 11.9 per cent. in benign cases to 40 per cent. in malignant cases. These facts were brought out to emphasize the prophylactic value of operating while the stones were yet in the gallbladder.

Touching the ætiology of common duct obstruction, he took the position that practically all cases were due either to stones or to malignant growths which themselves were caused by the irritating presence of stones. Gallstones might exist in the gallbladder for a long while without producing symptoms, but once they were in the common duct, not only pronounced symptoms, but many serious complications arose. The mortality in these cases was due to the complications, cholæmia, infection, inflammation, and exhaustion due to hæmor-

rhage at the operation. He emphasized the fact that common duct obstruction could be treated only by surgical methods. After removal of the obstruction, drainage was necessary, since it was imperative to overcome the infection, and no operation must be deemed finished until the patency of the opening into the duodenum was assured. Attention was called to the importance of not removing the gallbladder in the operation of choledochotomy, since stones occasionally reformed in the common duct, and in these cases the gallbladder served for drainage.

Gangrene of the Gallbladder; Rupture of the Common Duct; a New Sign.—Dr. JOSEPH RANSOHOFF, of Cincinnati, reported a case of gangrene of the gallbladder in a man aged twenty-one, with recovery following an operation. Another case was one of rupture of the common duct with an unusual sign. An operation was done, and it was followed by recovery. Although the cases differed in many important points, they had enough features in common to warrant their consideration together. In each of them a rapidly developing peritonitis made an operation imperative as a vital indication. In each the operation revealed a condition which, to the naked eye at least, had all the earmarks of peritonitis which might speedily cause death. In one there was an unruptured but gangrenous gallbladder, the contents of which were proved to be sterile; in the other there were large quantities of free bile in the peritonæum.

He called attention to a sign which was noticed in the case of ruptured duct before the incision was made, and one to which he believed attention had not been directed. It was a localized jaundice of the umbilicus. Although a single case was not usually sufficient to warrant the assumption that something new had been observed, this feature was so marked that he could not refrain from believing that further observation would give to this localized jaundice some value as a sign of free bile in the peritoneal cavity. In the case presented this feature gained in interest as the staining of the subperitoneal fat with bile was observed in the incision through the abdominal wall. The jaundice was doubtless purely the result of imbibition. It made itself manifest first in the integument of the navel because this part was thinner than the rest of the abdominal wall.

Total gangrene of the gallbladder had to his knowledge not been observed, except in the case presented, as an affection independent of gallstones. Total gangrene of the gallbladder was rare. In the case reported a most careful search failed to reveal the presence of a stone.

Experience with Downes's Electrothermic Angiotribe in Pelvic and Abdominal Surgery.—Dr. J. WESLEY BOVEE, of Washington, D. C., had employed these angiotribes in 203 abdominal and 27 vaginal operations. These 230 operations had been hysterectomies and panhysterectomies, the removal of the appendages by the vaginal route, removal of the same structures by the abdominal route, and removal of the vermiform appendix, the spleen, the kidney, a parovarian cyst, portions of the intestines, etc.

In these 230 cases he had had two of hæmorrhage subsequent to operation. He could not believe the method of hæmostasis employed was responsible in either instance. In the first, abdominal panhysterectomy was done for severe suppurative inflammation of the appendages in a very feeble and emaciated woman. Three weeks later, after being allowed to walk about for two days, she was seized with hæmorrhage from the bowels, stomach, and vagina. A mass was found in the pelvis, and her temperature became elevated, as was the pulse rate. The hæmorrhage continued at intervals for two weeks without improvement, and then the abdomen was reopened without any form of

anæsthesia. A large amount of blood coagula was removed from the peritoneal cavity, and vaginoabdominal through and through rubber tube drainage, with thorough irrigation of the peritoneal cavity with salt solution, was effected after the separation of multiform adhesions. Later feces and urine escaped by both ends of the drainage tract. Persistent irrigation and feeding cured her and she is a robust woman to-day.

In the other case, two weeks after vaginal hysterectomy for fibromata, the patient had a sharp vaginal hæmorrhage after walking a little more than on previous days. An examination with a Sims speculum revealed a malodorous discharge from the left lateral fornix of the vagina. The temperature was elevated about one degree. Daily irrigation for a week ended the trouble. In no other instance had hæmorrhage occurred.

The advantages of the electrothermic angiotribe of Downes in pelvic and abdominal surgery seemed to be a more reliable hæmostasis than by ligation; freedom from hæmorrhage during the operation; the ease of its application in situations in which the use of ligatures would be very difficult and uncertain; greater security against dissemination in radical operations for malignant disease; the ability to sterilize unclean areas before suturing, as in intestinal and appendicular surgery; lessening of the tendency to the formation of post-operative adhesions; increased speed in operations, such as removal of the uterus, the appendages, or the vermiform appendix; and the greatly lessened amount of pain following the operation. The disadvantages were the danger of accidental injury of the bladder, rectum, and ureter; the necessity of great precision in its employment; and the special care necessary to keep the paraphernalia in good working condition.

Dr. ANDREW J. DOWNES, of Philadelphia, in speaking of his instruments, stated that for four years he had not used a ligature except in the case of a woman upon whom he operated for extrauterine pregnancy, and who was moribund at the time. He had performed intestinal anastomoses and gastroenterostomies with his instruments; other surgeons had removed gallbladders, kidneys, etc. Personally, he had done four or five hundred hysterectomies with them, while other surgeons had performed from sixty to seventy hysterectomies with them. He did not think hæmorrhage in the two cases reported by Dr. Bovee could be attributed to the use of his method.

Dr. CHARLES P. NOBLE, of Philadelphia, had used the Downes instruments a number of times in cases of removal of the uterus for cancer, and said they were a great advance in this operation. They possessed a number of advantages over the application of the ligature. The chief advantage of the clamps over the ligature was that after the uterine arteries were tied on each side, when one came down to the vaginal plexus, which was the most troublesome part of the operation when using the ligature, the veins were apt to leak and flood the field, requiring a number of ligatures to secure hæmostasis around the cut vagina. If these instruments were used, the field would be perfectly dry. There was no trouble from hæmorrhage.

Dr. HOWARD A. KELLY, of Baltimore, said he had seen Keith, of Edinburgh, in 1887, remove an ovarian tumor with Skene's instruments; but those instruments were not satisfactory, and when Dr. Downes brought out his instruments he procured a set of them and had found them satisfactory. While the Downes instruments were useful in surgical work, he thought if surgeons exercised more care as to the character of ligatures they used daily, it would limit the use of the Downes method of instrumentation. He referred to the importance of using fine silk ligatures, which controlled bleeding from large bloodvessels and were practically innocuous.

(To be continued.)

New Inventions.

A NEW DRESSING FOR THE PENIS.

By FREDRIC GRIFFITH, M. D.,

NEW YORK.

Every practitioner knows of the difficulty involved in applying a bandage to the penis which will satisfy his sense of surgical nicety, and at the same time be comfortable to the patient. The method to be described was first employed by me as a preventive against laceration from gluing of the delicate tissues to the ordinary roll dressing after circumcision in infected cases. From a three quarter or one inch in width strip of rubber tissue cut off sufficient length to encircle the patient's penis and allowing for flaps as shown in the small upper cut—



by tucking the divided end through the slit in the other end after first placing it in position about the penis. The dressing may be applied as the primary application after a circumcision or as protective for venereal sores upon the glans, body of the penis, or peniscrotal junction. After a little practice one learns to fit the cuffs snugly and oftentimes no other dressing will be required. The patient may be taught to remove and to reapply the dressing for cleansing the parts in cases of venereal ulcer.

A single short and narrow strap of adhesive plaster may be used to hold the cuff dressing to the skin of the penis or a few oblique turns of a one half or three quarter inch width bandage may be applied in those cases where it is feared the tissue band may slip or a more impervious dressing is desired.

49 EAST SIXTY-FOURTH STREET.

Book Notices.

Topography of the Thorax and Abdomen. By PETER POTTER, Associate Professor of Anatomy, St. Louis University; sometime Instructor in Anatomy, University of Missouri.

This sumptuous publication, consisting of seventy-two pages of text and thirty-five plates with their legends, forms the first number of the first volume of the Science Series of *The University of Missouri Studies*, a series that bids fair to take a high place among the literary products of our universities, now so gratifyingly increasing in number. It is perhaps in many respects the best example that we have of sectional study of the cadaver rendered rigid by freezing or some other process of hardening. In this instance the body was hardened within a few hours after the death of the subject, a stalwart negro, by injecting the arterial system with six quarts of a twenty per cent. solution of formaldehyde. "Within twelve hours after being injected the entire body was perfectly rigid." Among the advantages of this method are the facts that the hardening is permanent and that everything

but bone can be cut with a knife, thus making cleaner surfaces than those left by a saw.

In a brief introductory section Dr. Potter gives an interesting historical sketch of the sectional method of studying anatomy, reminding us of its antiquity. Crude and more or less schematic representations of sections served as illustrations to the works of such early anatomists as Vesalius and Eustachius. Sections of the frozen body were employed by De Riemer, a Dutch anatomist, in 1803. The study of topographical anatomy is of course at its best when pursued upon the living subject, but there its possibilities are limited, and hardened sections must be resorted to as affording data next in value to those obtained from life.

Dr. Potter's own sections, twenty-five in number, form transverse slices of the trunk from the fourth intervertebral space to a point 4.5 cm. below the tip of the coccyx posteriorly and 2.3 cm. below the inferior margin of the symphysis pubis anteriorly. With regard to most of the lines of section, his endeavor was to make them pass through the intervertebral discs, but in this very difficult undertaking he did not invariably succeed; he came so near succeeding, however, that practically all the advantages of the plan were secured.

This study does not purport to establish any new point in the topographical anatomy of the trunk; indeed, that could hardly result from observations on a single cadaver. But it certainly sets a standard of accuracy and fulness of detail previously unequaled and perhaps unapproached. It is to be hoped that the author's methods will be many times repeated, and with all his carefulness, in order that the normal topography may eventually be arrived at.

Dr. Potter is more exact than most contemporary writers in the use of anatomical terms, the only exception that we have noted being the use of "hilus" for *hilum*. There is an occasional typographical error, like "transversus abdominus" (page 44), and the engraver has not in all instances preserved the precise lettering which we cannot doubt that the author wrote. A somewhat daring innovation in the literary references is that of printing German nouns without an initial capital.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the

Places.	Date.	Cases.	Deaths.
California—Los Angeles.....	Dec. 1-17.....	1	1
California—San Francisco.....	Dec. 1-17.....	1	1
California—San Jose.....	Dec. 1-17.....	1	1
California—San Diego.....	Dec. 1-17.....	1	1
California—San Bernardino.....	Dec. 1-17.....	1	1
California—Sacramento.....	Dec. 1-17.....	1	1
California—Stockton.....	Dec. 1-17.....	1	1
California—Fresno.....	Dec. 1-17.....	1	1
California—Merced.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	1
California—Colusa.....	Dec. 1-17.....	1	1
California—Yolo.....	Dec. 1-17.....	1	1
California—Sutter.....	Dec. 1-17.....	1	1
California—Nevada.....	Dec. 1-17.....	1	1
California—El Dorado.....	Dec. 1-17.....	1	1
California—Placer.....	Dec. 1-17.....	1	1
California—Yuba.....	Dec. 1-17.....	1	1
California—Butte.....	Dec. 1-17.....	1	

Year of Birth—1905.			
Brazil—Rio de Janeiro.....	Nov. 19-26.....	3	9
China—Hongkong.....	Oct. 28-Nov. 4.....	2	2
India—Bombay.....	Nov. 21-28.....	8	3
India—Madras.....	Oct. 26-Nov. 22.....	52	22
Plague.			
Brazil—Rio de Janeiro.....	Nov. 19-26.....	25	9
China—Hongkong.....	Oct. 28-Nov. 4.....	2	1
India—Bombay.....	Nov. 21-28.....	8	8
India—Madras.....	Oct. 26-Nov. 22.....	52	17
India—Karnataka.....	Nov. 19-26.....	6	5
Mexico—Coatzacoalcas.....	Dec. 3-9.....	1	1
Mexico—Cordoba.....	Dec. 3-16.....	3	3
Mexico—Zenopa.....	Dec. 3-9.....	1	1
Philippine Islands—Manila.....			
Oct. 28-Nov. 11.....	15	15	
Russia—Vistula Province.....			
Oct. 26-Nov. 22.....	52	22	

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending December 27, 1905:

CASTLE, J. H., Chief of Division of Chemistry, Hygienic Laboratory. Granted three days' leave of absence.

FOSTER, M. H., Passed Assistant Surgeon. Relieved from duty at San Diego, Cal., and temporary duty at Galveston, Texas, and directed to proceed to San Juan, P. R., assuming the duties of Chief Quarantine Officer.

FRANCIS, EDWARD, Passed Assistant Surgeon. Granted leave of absence for one month from January 17, 1906.

GRUBBS, S. B., Passed Assistant Surgeon. Granted seven days' leave of absence from December 22, 1905, under paragraph 191 of the regulations.

GUSTATTER, A. L., Acting Assistant Surgeon. Excused without pay for a period of twenty-five days from December 21, 1905.

HERTY, F. J., Pharmacist. Granted seven days' leave of absence from December 18, 1905, under paragraph 210 of the regulations.

LLOYD, B. J., Assistant Surgeon. Directed to proceed to Guayaquil, Ecuador, and relieve Acting Assistant Surgeon Luis F. Cornejo Gomez.

McKAY, MALCOLM, Pharmacist. Granted leave of absence from December 13th to 31st, inclusive.

WALERIUS, MATHIAS, Pharmacist. Relieved from duty at Chicago, Ill., and directed to proceed to Memphis, Tenn., reporting to Medical Officer in Command for duty and assignment to quarters.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending December 30, 1905:

CARROLL, JAMES, First Lieutenant and Assistant Surgeon. Left Washington, D. C., en route to New Orleans, La., to attend the meeting of the American Association for the Advancement of Science.

CHURCH, JAMES R., Captain and Assistant Surgeon. Ordered to repair to Washington, D. C., and report in person to the Secretary of War for temporary duty, and on completion thereof will return to Fort Robinson, Neb.

DEAN, E. A., First Lieutenant and Assistant Surgeon. Granted three months' leave of absence.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending December 30, 1905:

CURTIS, E. E., Acting Assistant Surgeon. Appointed an acting assistant surgeon from December 21, 1905.

DORSEY, B. H., Assistant Surgeon. Ordered to Altoona, Pa., for duty with Recruiting Party No. 4.

JUDD, H. W., Acting Assistant Surgeon. Detached from duty with Naval Recruiting Party No. 4, ordered home, and granted leave until expiration of appointment as acting assistant surgeon.

McCLANAHAN, R. K., Assistant Surgeon. Having been examined by a retiring board and found incapacitated for active service on account of disability, not the result of any incident of service, is retired from active service on furlough pay from December 19, 1905, under the provisions of section 1454, Revised Statutes.

Births, Marriages, and Deaths.

Married.

ADELSON—COHEN.—In New York, on Wednesday, November 29th, Dr. Jonas Adelson and Miss Lulu Leonore Cohen.

DU BOIS—PARKER.—In New York, on Wednesday, December 28th, Dr. Francis Elbert Du Bois and Miss Gertrude Van Courtlandt Parker.

GRANT—ROWE.—In Richmond, Virginia, on Friday, December 15th, Dr. Calles Grant and Miss Elinor C. Rowe.

LOYD—NORMAN.—In Baltimore, Maryland, on Wednesday, December 20th, Dr. L. Lloyd and Miss Rosa S. Norman.

MACLEOD—TWIGGS.—In Augusta, Georgia, on Wednesday, December 27th, Dr. George I. Macleod, Jr., and Miss Margaret Glover Twiggs.

VOORSANGER—ACKERMAN.—In San Francisco, California, on Thursday, December 21st, Dr. William C. Voorsanger and Miss Maude Ackerman.

WOODRUFF—MITCHELL.—In New York, on Thursday, December 21st, Dr. Lorando Woodruff and Miss Margaret Louise Mitchell.

ZIMMERMAN—GRAVENOR.—In Philadelphia, Pennsylvania, on Thursday, December 21st, Dr. Oscar A. Zimmerman and Miss Edna Brooks Gravenor.

Died.

ABY.—In New Orleans, Louisiana, on Monday, December 25th, Dr. Thomas Y. Aby, in the sixty-sixth year of his age.

BURBANK.—In Chicago, Illinois, on Wednesday, December 20th, Dr. William M. Burbank, in the sixty-second year of his age.

CALDWELL.—In Summit, New Jersey, on Saturday, December 16th, Dr. John J. Caldwell, in the seventy-third year of his age.

CARTER.—In Akron, Ohio, on Saturday, December 23rd, Dr. R. B. Carter, in the forty-eighth year of his age.

GOFF.—In Buffalo, N. Y., on Wednesday, December 20th, Dr. Edmund F. Goff, in the fifty-third year of his age.

GRANGER.—In Bay City, Michigan, on Friday, December 22nd, Dr. George H. Granger, in the sixty-fifth year of his age.

KEYES.—In Washington, District of Columbia, on Tuesday, December 19th, Dr. Charles W. Keyes, in the fifty-third year of his age.

LEWIS.—In Brooklyn, N. Y., on Wednesday, December 27th, Dr. Abraham Lewis, in the thirty-fourth year of his age.

NAYLOR.—In Philadelphia, Pennsylvania, on Saturday, December 16th, Dr. Walter Williams Naylor.

SANBORN.—In Franklin Falls, New Hampshire, on Tuesday, December 19th, Dr. John H. Sanborn, in the seventy-sixth year of his age.

TAYLOR.—In Columbia, South Carolina, on Wednesday, December 27th, Dr. B. W. Taylor, in the seventy-third year of his age.

WARNER.—In Clinton, Illinois, on Friday, December 22nd, Dr. John Warner, in the eighty-seventh year of his age.

WEBSTER.—In Cleveland, Ohio, on Friday, December 22nd, Dr. Charles L. Webster, in the forty-fourth year of his age.

WILLIAMS.—In Chicago, Illinois, on Tuesday, December 19th, Dr. Charles A. Williams, in the sixty-seventh year of his age.

New York Medical Journal

INCORPORATING THE

Philadelphia Medical Journal and The Medical News

A Weekly Review of Medicine

VOL. LXXXIII, No. 2.

NEW YORK, JANUARY 13, 1906.

WHOLE NO. 1415.

Original Communications.

FRIEDREICH'S ATAXIA, WITH A REPORT OF THIRTEEN CASES.*

By WHARTON SINKLER, M. D.,

PHILADELPHIA.

Among the most interesting and at the same time, as regards their pathology, the most mysterious subjects in medicine are the diseases which occur in one or more members of the same family, without having of necessity a history of heredity. In saying that these diseases are difficult to explain, I mean that so far no satisfactory solution has been given as to why several members of a family should develop the same form of degenerative disease of the nervous system, when in many cases there can be traced no history of the same or other neurotic disease in the parents nor can there be discovered any predisposing cause in those members of the family who are afflicted with the same disease, which is progressive and incurable.

It is generally conceded that family diseases are the result of developmental weakness in the central nervous system, but why this weakness exists is not explicable. We shall, therefore, for the present have to be satisfied with the fact as it is, but I would suggest the consideration of an analogous condition which is met with in the lower animals, in which we sometimes find that certain individuals, perfect in every particular, beget offspring, many of which have certain defects and weaknesses. This, as all breeders know, is seen among horses and dogs, when it may occur that an animal possessing fine qualities, not only fails to impart them to the animals of which he is the sire, but certain defects or anomalies appear in all of his offspring.

Probably the most typical example of the family diseases is Friedreich's ataxia. This was described by Friedreich in 1863, and has borne his name since that time. He called it hereditary ataxia, but the name is not appropriate or justifiable, because in the majority of cases there is absolutely no history of the existence of the same or even of similar disease either in the parents, grandparents, or collateral ancestors of the patient. Several other names have been given to the disease—congenital ataxia, posterolateral spinal sclerosis, generic ataxia, and family ataxia

—but the name Friedreich's ataxia seems the most appropriate, for it describes the most conspicuous symptom of the disease and distinguishes it from locomotor ataxia by the qualifying name of the author who originally described the affection.

Friedreich's ataxia is a chronic degenerative disease, the result of defective development in the spinal cord. Friedreich, when he first described the disease, thought that it was a juvenile form of locomotor ataxia, but it is in reality a totally different affection. There is found a thickened and sclerotic condition of the posterior and lateral columns of the spinal cord, beginning usually in the dorsal region and extending in the ascending and descending tracts, finally involving the bulb. The symptoms of the disease are ataxia and incoordination beginning in the lower limbs and gradually involving the upper extremities and finally the organs of speech; curvatures of the spine and deformities of the feet and nystagmus. As the disease progresses, the patient becomes more helpless, and contractures and paralysis appear and finally marked bulbar symptoms are present. The knee jerk is usually absent, but in some cases it is present or exaggerated. The features in which it differs conspicuously from locomotor ataxia are that there is seldom any involvement of the eyes, the pupillary reflexes remaining normal and that there are no optic changes. There is seldom pain or anæsthesia, and gastric or intestinal crises are absent.

ÆTIOLOGY: There is a predisposition to degeneration in the spinal cord, the result of defective development either by heredity or otherwise. This developmental defect is, as has been already remarked, seldom traceable to the same disease in the ancestors. Gowers, in an interesting lecture on these developmental defects in the nervous system, has given the word "abiotrophy" to signify defective vital nutrition, and treats at some length of the different forms of family disease, the result of inherent weakness in the motor neurons. He does not attempt, however, to explain the origin of it.

It frequently occurs that in the parents or grandparents of the patients suffering from Friedreich's disease, there is a history of some neuroses, such as insanity, epilepsy, or paralysis, or there may be inebriety or tuberculosis. In other patients, it is difficult to find anything unusual in the ancestors as regards neuroses. Very rarely it has been found that some relative has suffered from locomotor ataxia. Among Griffith's cases

* Read before the Tri State Medical Association of the Carolinas and Virginia, March, 1905.

were two patients whose grandfather was said to have an ataxic gait. In three other cases, it is stated that the mothers of the patients were spoken of as ataxic, and in one family in which the disease existed, there were six brothers and sisters of the patient and eight maternal uncles and aunts, as well as a grandmother and cousin who were said to have had the same disease. In another patient, two uncles were in all probability subjects of *Friedreich's ataxia*. In nearly all of the cases in which ancestors of the patients were reputed to have some form of ataxia, there is no positive and direct evidence, except in three or four. Syphilis in the parents may be an element in the cases of some patients, and intemperance is undoubtedly a factor in some.

The disease usually develops about the age of puberty, sometimes as early as five or six years and in some patients symptoms of the disease have been observed since birth. J. P. Crozer Griffith, *Transactions of the College of Physicians of Philadelphia*, 1888, in the best paper on the subject yet written, has collected and studied 145 cases. He states that in 15 of his cases the symptoms began at about two years of age, and, including these, in 39 patients the disease appeared before six years of age. In 45 patients, the disease was first observed at from six to ten years of age, and in only five, between the ages of twenty and twenty-five. His statistics show that in over one half of the patients studied by him the first symptoms were observed before the age of eleven years. It has been stated that the majority of cases occur in males, but the preponderance is so small as not to be significant, and probably the study of a larger number of cases would show that sex plays little or no part. A certain proportion of cases have followed some acute disease, such as typhoid fever, whooping cough, meningitis, scarlet fever, and diphtheria, but the number of cases so observed has been small. The characteristic feature of the disease is the tendency to affect more than one member of a family. In the 145 cases collected by Griffith, all occurred in 79 families of brothers and sisters, and had it been possible to obtain histories of the brothers and sisters of individual patients who were stated to have one or more brothers or sisters affected, there would probably have been a still greater number of cases in the same number of families. It is by no means the rule that all children of a family become affected, for in many instances only one child of several develops the disease; for example, in 24 of Griffith's cases it was stated that the patient was the only child of several affected by the malady. In some cases which have been reported, a majority of the children of a family have had the disease, and in others every child has suffered from it. In Griffith's table, in one family eight children were affected with *Friedreich's ataxia*, and there are several instances in which there were five cases in a family. I have myself put on record three cases in one family. There had been nine children, two of whom died in early life; of the remaining seven, three had *Friedreich's ataxia* and the other four were perfectly well and healthy. The parents of these children were living at the time the cases were reported and were in excellent health, and no

history of epilepsy, insanity, locomotor ataxia, tuberculosis or intemperance could be elicited.

PATHOLOGY: As before stated, the seat of lesion of *Friedreich's ataxia* is in the spinal cord. The disease is due to the arrest of development in the various systems of fibres in the spinal cord, and an inherent or congenital tendency to degeneration in the motor neurons. A number of autopsies have been made in this disease and the results have been quite uniform. The spinal cord in all patients was usually thin and small, and a thickening of the pia mater, especially about the posterior surface, was observed. Sclerotic changes exist throughout the whole length of the posterior columns and sometimes extend to the lateral columns. In some patients other tracts of the cord are affected, such as the anteriomedian columns, but as a rule the tracts principally involved are the posterior and lateral columns, and in patients with advanced cases the medulla shows extension of the sclerosis, but the most characteristic change is the involvement in the cells of the hypoglossal nucleus. It has been asserted that in all patients suffering from *Friedreich's ataxia*, there are secondary changes in the cerebellum present, but this view is not universally accepted. We must distinguish this disease from the so called cerebellar hereditary ataxia.

SYMPTOMS: Among the earliest symptoms observed is an unsteadiness in the gait, or incoordination in the use of either the upper or lower extremities. This, at first, attracts but little attention. The child is thought to be clumsy and awkward in his gait. In a certain proportion of cases the history shows that the patient has never walked very well. There is usually a gradual but progressive increase in all of the symptoms, and in many cases several years elapse before the patient becomes unable to work or care for himself. There may be slight pains or numbness in the lower extremities, but it is very rare to find these. The gait may be characteristic of locomotor ataxia; that is, the high elevation of the foot and the heavy fall upon the heel, but this is not constant; in the majority of cases the gait of the patients is unsteady and oscillating, like that of a drunken man. In other patients, probably those in which the lateral columns are more involved than the posterior, the gait is distinctly spastic. There is functional rigidity of the muscles and the patient is sometimes obliged to keep his eyes fixed upon the floor or pavement, as in locomotor ataxia. The station is almost always bad, and the Romberg symptom—that is, inability to stand with the eyes closed—is present in the majority of patients. As the disease advances, the incoordination of the upper extremities develops and the patient has much difficulty in using the hands to perform any delicate motions, and eventually he becomes unable to do anything for himself. Tremor occurs in a certain number of patients, and in quite a large number of instances choreic movements are observable. In fact, in two of my patients, referred to later, the choreic movements were so conspicuous that before a thorough examination had been made it was thought that the cases were examples of Sydenham's chorea. In many cases the patients have involuntary spasmodic contractions of the muscles. Sometimes there are cramplike contractions of the limbs when

the patient is lying down. In other cases the patients have spasmodic contractions of the facial muscles, giving rise to contortions and a meaningless smile. Contractures of various parts are often seen. Talipes is regarded as a common symptom and equinovarus is one of the most common of the deformities. In two of my patients there was marked talipes which interfered materially with the patient's walking.

The condition of the reflexes varies in different patients. In some there is total absence of knee jerk and other deep and superficial reflexes, and in others the reflexes are not only unchanged but may be exaggerated. The condition of the reflexes must depend on the extent of the lesion in different parts of the spinal cord. In those patients where the posterior columns are most involved, one would naturally expect to find absence of knee jerk, but where the lateral columns are equally or more sclerosed we should expect to find increased knee jerks as seen in ataxic paraplegia. In four of my patients the reflexes were preserved, but in them there was also a spasmodic tendency and general hypertonia. In the other eight the knee jerks were absent. As the disease advances, paralysis is prominent and atrophy of the muscles becomes very pronounced. In some patients there is no muscular wasting; in fact, in 60 of Griffith's patients it is said there was no atrophy. Pain, as before stated, is seldom observed in this disease, and cutaneous sensibility is seldom disturbed. Occasionally patients are met with in which there is localized anæsthesia, and in others there is general impaired sensibility to pain or touch in the upper and lower extremities. Paræsthesia, such as numbness and formication, is observed in a few patients, but the girdle sensation is seldom complained of. Disturbance of speech is one of the most prominent of the bulbar symptoms, and will probably develop in every case in which the patient lives long enough for the disease to involve the medulla. In many cases the speech becomes so much disordered that the patient is almost unintelligible. The speech may be slurring and is sometimes typically scanning, but in many it is merely slow and deliberate and the articulation thick. Nystagmus is a constant late symptom and indeed may be present in the early stages of the disease, but it is usually observed about the same time that the speech becomes affected. Strabismus has been noted in but few patients and diplopia is an even more rare symptom. No changes in the pupillary reflex have been observed with the exception that in a few patients the light reflex is sluggish. The eye grounds have been found normal and so seldom has there been any change found in the fields of vision that where it has occurred it would be hardly just to connect it with the disease. Oliver made a very thorough examination of one of my patients and the only changes he found were somewhat narrowed fields. Deglutition is seldom involved, but the tongue is quite frequently affected and often there is inability to retain saliva in the mouth.

Intellectually, the patient is much better than one would expect from his appearance. In advanced cases, there is unquestionably deterioration of the mind, and in some of the congenital cases the child is distinctly defective mentally, but in the majority

of cases the intelligence of the patient is quite up to the average and he is able to acquire a good education. Vertigo is not an infrequent symptom. Affections of the bladder are rarely met with. One of my patients had some slowness in passing of urine, and other cases have been reported of incontinence, but the bladder symptoms are rare and the same may be said of disorders of the rectum, the contrast between this disease and locomotor ataxia being marked in this respect.

Disorders of the sexual apparatus are said by some writers to be quite common, but this is a point difficult of investigation, as a majority of the cases begin in early childhood and terminate before adult age. Menstrual disorders are not common.

PROGNOSIS: The disease is one of slow progression and is incurable. It may remain stationary for a time, or there may even be some temporary improvement. According to Dana, the longest duration on record is forty-six years, and the shortest, two years, the average length of life after the onset of the disease being fifteen or twenty years. In three of my cases which I have been able to follow to the termination, two patients died at the age of twenty-six and one at twenty-four years.

TREATMENT: Hygienic measures are of more assistance than anything else. The wearing of suitable clothing, avoiding cold and exposure to stormy and inclement weather are of great importance, as patients suffering from Friedreich's ataxia are more susceptible to colds and pulmonary affections than are others. Should a patient's circumstances permit it, he should live in a climate where the temperature is not subject to violent changes, and where he can spend all of the day in the open air. Massage and electricity, judiciously applied, are unquestionably beneficial. Some of the nerve tonics should be used and the prolonged administration of arsenic in moderate doses is said to be beneficial. Prophylactic measures in families in which the disease has made its appearance have been recommended, and Dana suggests that an infant whose brother or sister may have the disease should not be nursed by the mother.

I give below the histories of 13 cases of Friedreich's ataxia which have come under my personal observation. Of these cases, three patients were in one family, three in another, and two in a third, so that the thirteen cases occurred in 8 families. In addition to these, one of the patients had a brother who also had Friedreich's disease. The sexes were about equally divided, there being seven males and six females. The age of onset varied considerably. The youngest patient in which the early symptoms were observed was two years. There were two at three years, two at five, one at seven, one at eight, one at eleven, two at eighteen and one at twenty-one, and in one instance it was stated that the child had never walked normally. As regards the reflexes in these patients, the knee jerk was absent in nine, present in two, and exaggerated in two; the plantar reflex was absent in five and present in eight; contractures of the feet and limbs were present in seven patients; the speech was affected either in the way of slurring and scanning or indistinctness in seven patients, and in six it was not disturbed; nystagmus was present in nine patients and absent in four. In one family of three, in which

the cases were followed to the termination, all three patients died of pulmonary consumption, two at the age of 26 and one at the age of 24. In this family it is also interesting to observe that there is now a third generation in which are three children, all perfectly normal. It is also noteworthy in the families in which there were two or more cases, the type of the disease was the same in each instance. In this connection it may be remarked that the difference in type should not make us consider that there is any essential difference in the disease. In certain patients the reflexes are found to be present or exaggerated, while in others they are absent. In some there is nystagmus and in others not. F. Raymond, in a recent paper, expresses himself very clearly on this point, stating that "various lesions have been found in patients suffering from ordinary Friedreich's ataxia, showing that the morbid processes may not be confined to the posterior columns of the cord, but may implicate other portions also," and he draws the conclusion from this that it is unnecessary and misleading to multiply special cases of familiar ataxy.

CASE I.—F. J. O. Male. Referred to me by Dr. S. M. Woodburn of Towanda, Pa., Nov. 24, 1900. Age 24. Patient has one sister who developed Friedreich's disease. Heredity:—His mother comes of Irish and his father of German descent, but both were born in this country. There is no history of any form of hereditary disease on either side of the family. The paternal grandfather and mother were both over 70 when they died; the maternal grandfather was 76 and the maternal grandmother was 87 when she died. His father is a large man, weighing 240 pounds, 57 years of age and very healthy and is temperate in his habits. His mother is 54 and is in good health, and has had only two children and no miscarriages. Patient had diphtheria at 12; also had scarlet fever and measles; always convalesced very slowly from any illness; he never has been able to take very active exercise since he had diphtheria, but more on account of general weakness than any local loss of power. He has been employed as clerk in a hotel kept by his father for several years, and although he has had no hard work, his life has been rather sedentary and he has been in a room in which the atmosphere was bad. His mother noticed that six or seven years ago, that is when he was about 18 years old, he did not walk as well as formerly; and since then the trouble has been gradually growing worse. He has had trouble with his eyes, suffering from conjunctivitis and has had postnasal catarrh for several years; he also suffered from frequent headaches until two years ago. About the time that difficulty in his gait was observed he began to have slight shaking of the head and defect in articulation. Two years ago he went to Denver for his health and remained there for six months; he had very little catarrh while there but began to have a good deal of heart trouble, such as palpitation, etc.

Status præsens. A rather delicate looking man. He has slight conjunctivitis. The pupils are small and look tabetic but they respond to light and accommodation; knee jerk, also plantar and abdominal reflexes absent; cremasteric reflex present; sensation is uncertain; he feels touch but after contact is once made he is unable to say whether he is still being touched or not. Tactile sensation is not delayed. The station is very bad and when the eyes are closed it is much worse. There is marked shaking of the head which is increased when standing. He is awkward in the use of his hands, but they are not ataxic, and he writes well. There is marked right lateral curvature

of the spine, the right shoulder being much higher than the left, and the right scapula is very prominent. The right leg is decidedly shorter than the left. There is no bladder difficulty nor loss of rectal sensation. He thinks that his sexual power is lessening. He never had pain in the legs but once or twice he has had attacks of neuralgic pain; his speech is decidedly scanning. His condition remained much the same until his death from pneumonia on Sept. 5, 1903, at the age of 27 years.

CASE II.—E. M. D. Aged 25; sister of preceding patient. Her general health has been very good; she has never suffered much from headaches but has had more or less frequent attacks of vomiting which were usually attributable to eating candy excessively. She never had any illness except measles after which she had weak eyes. She had been well until four years ago, with the exception of an attack of anæmia about nine years ago. She was treated for this and soon recovered her health and regained her usual color. She has never been very vigorous looking and was inclined to be pale. She has always been active in every way and particularly fond of dancing. About four years ago she noticed that she staggered a little in walking and that she could not dance as well as formerly; and that she was liable to stumble and fall. Since that time there has been gradually increasing awkwardness in her gait, although she has been able to go about as much as she wished, but she has not been able to run or to dance for the past three years. There have never been at any time any pains in her limbs or in any part of the body. Knee jerk and plantar reflex are absent. Sensation unimpaired. There are no pupillary changes but the reaction to light is slow and there is no nystagmus. Her vision is good but she often has attacks of swelling of the eyelids which do not seem to arise from any definite cause. Her station is poor and is much worse with the eyes closed, but she is able to maintain her equilibrium for some time. Her walk is very clumsy and staggering. There is some awkwardness in the use of the fingers but not enough to prevent her from sewing, writing and doing many other things. She is unable, however, to do embroidery. Her speech is distinctly impaired, there being some thickness and hesitancy in speaking and she talks slowly like an intoxicated man. She is rather pallid and her general health is not good. She is usually tired and takes cold very readily. Her appetite is good. She has no trouble with the bladder or rectum and her menstruation is regular but rather scant.

CASE III.—C. N. Male, aged 13; a native of this country. His father is German and his mother Irish; they are both living and in good health, and the father is temperate in his habits. One sister has some spinal weakness. Three brothers and sisters are dead; one died of marasmus, one of membranous croup and one of enlarged liver at the age of seven years. The patient was born at term after a prolonged instrumental labor. He was breast fed and began to walk at thirteen months. When five years old, it was noticed that he had trouble in his gait. He often fell because his ankles seemed to give way. About the same time, the arms began to grow weak and occasionally there would be irregular, jerking movements in the arms and legs. His speech has always been somewhat affected. For about five years he has had occasional darting pains up and down the spine, but this has not been a prominent symptom. For several years there has been slight numbness in the fingers.

Status præsens. He is rather small for his age, and pallid. He walks with his legs wide apart and on the inner edge of his foot; the left foot is smaller than the right and the muscles of the entire body are small and soft. There is a double lateral curvature, with

the dorsal convexity to the left and the lumbar to the right. The left scapula protrudes; and the head is carried bending forward on account of weakness of the neck muscles. In standing, the abdomen protrudes, as a result of the lumbar curvature of the spine. Knee jerk absent; the abdominal reflex is well marked and the cremasteric reflex is preserved. Elbow jerks are absent. Plantar reflex is present in the right foot, but it is absent in the left. He has been wearing for some months a spinal brace and is unable to sit up any length of time without it on account of fatigue. The speech is slow and drawly, and it sometimes seems as though it required great effort to pronounce the next word. There is no difficulty in the movements of the tongue and there is no undue salivation. An examination of the eyes by Dr. G. E. de Schweinitz gives the following result: "Vision three-fourths in each eye; pupils normal; faint lateral nystagmus. Oval discs; the outer halves are pallid; veins are too faint and the arteries by contrast are small; form fields are normal; color fields faintly contracted." The patient's mental condition is good and, in fact, in intelligence he is above the average. He is in the highest class in the Grammar School. There is equinovarus in both feet. The contractions in the right foot are not so marked as in the left. Sensation is slightly impaired; touch with a pencil point is felt only on the dorsum of the toes and heel, while it is felt well above the ankle. His station is poor and with the eyes closed it is worse. With the eyes closed he has more difficulty in coordinating the movement of his legs and arms than with them open. In attempting to bring the finger tips of the two hands together with the eyes shut he does not come within a few inches of touching them. The same difficulty in placing the feet with the eyes shut is felt.

The patient has been seen by me from time to time since May, 1890, and his condition has grown progressively worse. He sat up with great difficulty when last seen; he was totally unable to walk and was very clumsy in the use of his hands. With great difficulty he could assist in putting on his clothes, but there was great awkwardness in the use of the fingers. He was unable to write but had been using the typewriter quite successfully. His speech had grown very much worse and not only was it slow, drawly and indistinct, but he talked in a high pitched falsetto. No atrophic changes had at that time appeared and there was little change in sensation.

CASE IV.—(Recorded in the *Medical News*, Philadelphia, July 4, 1885.) C. G., aged 18, male. There is no history of ataxia or nervous trouble in the family. A paternal uncle and two first cousins had tuberculosis. The patient was considered practically healthy until eleven years of age. He then had scarlet fever, but recovered perfectly and without kidney complications. An awkwardness which had been previously noticed now became more marked, but it was not until the age of fifteen that he himself became aware of it. The difficulty in walking was first described as a "winding, shuffling gait." This was the first symptom; soon after he became awkward in the use of his arms, and there was hesitancy in speech. When examined in May, 1884, he was unable to walk without help, and then only with great difficulty. His gait is exactly like that of a case of tabes. He has great difficulty in writing or doing anything with his hands. There are no areas of anæsthesia or numbness. Knee jerk, cremasteric and abdominal reflexes are all absent. There is no disturbance of vision and no nystagmus. The toes of both feet are strongly extended and there is slight contraction of the plantar fascia. He has perfect control over the bowels, but there is some difficulty in urinating.

CASE V.—Mary G. (Also reported in the *Medical*

News of Philadelphia, July 4, 1885.) Aged 11. She is the eldest of five children; all the others are healthy and have had no nervous disorders. The parents are healthy, and neither they nor their ancestors are known to have had any nervous affection. The patient has never had any illness. When she was eight years old, her mother noticed that her hands were unsteady, and that she often dropped things. Soon after this, she walked awkwardly and often stumbled and fell. There is no pain or visceral crisis; neither has there been any disorder of the bladder or rectum. The patient was seen in May, 1885; she was well nourished. In standing, the body sways to and fro, and if the eyes are closed the swaying increases to such an extent that she would fall if not held. There is marked anterioposterior curvature of the spine. The patella reflex is absent in both sides, but the skin reflexes are preserved. The movements of the hands are awkward and badly directed, but she can use them for many things. When her eyes are closed she has difficulty in guiding the fingers to any point indicated. The patient was intelligent and had been attending school. There was no disturbance of the speech.

CASE VI.¹—Annie M., aged 15. Her parents are living and in excellent health. There is no history of chorea, epilepsy or insanity to be found in the relatives on either side of the family, nor of tuberculosis or of alcoholism. There have been nine children born to the parents, two of whom died in infancy; three, including this patient, are suffering from Friedreich's ataxia, and the four remaining children are in excellent health. When three years old she had, what her mother called a stroke and was paralyzed for some months. She gradually improved and became able to walk six squares to school, but when convalescing from the paralysis she began to have irregular movements in the arms and legs. About five years ago she had a bad fall and has been getting worse ever since. She began to menstruate at fourteen and has continued regular. She has slow irregular movements of the head and occasional contortions of the facial muscles. She can pick up objects fairly well and can even thread a needle, but this she does with great difficulty. All of the movements of the arm are done in an incoordinate way. Her station is poor with the feet together. She walks with the feet wide apart, sways greatly and the gait is staggering and irregular. Knee jerks are present, and there is no loss of sensation. There is nothing abnormal about the eyes except slight, though distinct lateral nystagmus. Her general health is good and she is intelligent. Speech is hesitating and drawly. There are no movements of the hands or limbs when they are at rest, but when she attempts any voluntary act, the movements are suggestive of chorea. In this patient, the symptoms progressed slowly but steadily and she died of pulmonary tuberculosis at the age of 26.

CASE VII.—Michael M., aged 12, brother of Anna M. (case VI). At the age of two years his mother noticed a tendency to bend the head backward. Then incoordination in the arm was observed. Upon examination in 1883, when sitting up, slow movements of the head were continuous. When asked to do so, he moves his head freely in every direction. There is some slight choreic movement of the facial muscles. The hands remain quiet at rest, but occasional twitching of the fingers occurs. He can perform fine movements, like picking up a pin, and the grip of both hands is good. Any attempt, however, to use the arms shows distinct incoordination. He stands with the feet far apart and the knees flexed, and sways greatly. Gait is extremely ataxic, his legs fling about and he staggers from side to side; there is spinal curvature. Knee jerks are slightly exaggerated, but there is no ankle clonus. There is slight lateral nystagmus. Speech

¹ The following cases were reported in the *Proceedings of the College of Physicians of Philadelphia*, 1888.

is drawing but distinct. This patient grew worse by degrees and more helpless, and died at the age of 26, of pulmonary consumption. He was able to walk about until almost the time of his death, but was obliged to steady himself against the tables and chairs. He had very marked, coarse tremor on attempting movements.

CASE VIII.—Bernard M., brother of patients in cases V and VI. He was also seen in 1883. Aged 10 years. He was always a delicate child, and when seen was a pale and poorly developed boy. The disease began at about three years of age and gradually progressed. In this case there was almost constant movements of the head of the patient from side to side, but with a very marked tendency to drop forward. Constant and marked choreic movements of the facial muscles. Speech very slow and indistinct; marked lateral nystagmus. All attempts at voluntary movements increased the choreaform movements. For a year he has been unable to stand, but if supported he can walk, but can make only a few tottering steps.

CASE IX.—Clara E., age 10, born in Carlisle, Pennsylvania. Admitted to the surgical ward of the Orthopaedic Hospital and Infirmary for Nervous Diseases, May 11, 1891, on account of curvature of spine. In July she was transferred to the nervous ward. Family and personal history. Her parents are both living. They are Germans and speak very broken English, sometimes almost unintelligible. The father is a mason by trade and is an intemperate man. When sober seems well-doing. Is above his wife in intellect. She is an ignorant, rough woman. They are both strong and hearty and have never had an illness. They know of no hereditary disease in their families. The man's parents were both hardy persons. The woman could give no information about the health and habits of her relatives. They have had two children—Clara, and one girl younger who died at the age of four years. As it had been several years since her death, the physician who attended her cannot recall the circumstances fully, but thinks it was from some acute disease, possibly dysentery. The parents say she had never been ill up to within two weeks of her death.

The patient was a strong, healthy child until she was five years old, when she was taken suddenly ill. The physician thought at first it was some kidney affection, but found, upon examining the urine, that he was mistaken, and later he pronounced it infantile paralysis. After an illness of several months she was obliged to creep until gradually growing stronger, she was able to walk—probably better than she does now, for they tell me in the past two years she has been growing worse. She seemed as bright as the ordinary child of her age.

Status present of September 30th, 1891. Expression somewhat vacant with an absence of fixity in the glance. Eyes constantly moving (nystagmus) and slightly turned up so that the lids obscure the iris as far down as the upper border of the pupils; the iris is brown. Slight convergent squint. Choreic movements of lips, chin and muscles of neck. Tongue protruded fairly straight, but it is in constant motion and deviating most often toward the right. Teeth are in good condition and are not notched. Head bent forward, chin almost resting on sternum, also leans to the right. On effort, head can be held fairly erect. The general attitude, in sitting posture, is one of forward stoop; she is too limp to sit up straight. The shoulders rounded and bent forward, but the body is well nourished. There is commencing development of breasts and nipples. The crease from axilla extending above breasts is more on the right side. In supine position the shoulders are high. The back presents a marked anterior spinal curve in sitting posture, sharpest curve at juncture of dorsal with lumbar vertebrae.

Left shoulder is higher than the right; greater muscular prominence above left than right scapular spine. The left gluteal fold is double and higher than the right, which is single. Left hip is slightly higher than right. The crease between the buttocks, from below upward, inclines to the right. The left hip is the more prominent and the right buttock is slightly flattened. (These observations on the legs were made while the child was supported in erect posture, a nurse placing her hands beneath the armpits.) In this position was noticed a slight double lateral curve deflecting to the right in the lumbar region, and to the left in the upper dorsal and lower cervical. In the sitting posture there is no lateral spinal curve. Knee jerks are absent on both sides. Both arms and legs are moved in all directions. No fixation of any joint nor any tendency to contractures. She is unable to stand. The muscles of both lower limbs respond normally to Faradism.

CASE X.—V. P., admitted to the Orthopaedic Hospital and Infirmary for Nervous Diseases May 31, 1887; white; female; 22 years of age; born in New Jersey.

Family History.—Mother living, suffering from heart disease. Father died from accident. She is one of ten children. One brother is affected as she is, having been unable to walk for nine years. Seven other brothers and sisters are healthy. One brother died of heart disease, another in infancy. There are no other cases of nervous or mental diseases in family except brother mentioned, and no evident inherited disease tendency.

Past Medical History.—Patient had measles eight years ago; whooping cough as a baby, and was until present trouble strong and well. No history of injury. Four years and a half ago she began to have much weakness in the small of back. She later had an attack of fever, confining her to bed for nine weeks, no headache, diarrhoea or nose bleed or eruption. She had no convulsions then or at any other time. After recovery from this illness she was very weak and unable to stand without assistance, or to walk or sit up. She remained in about the same condition until four years ago (in April) when she was in the hospital under the care of Dr. Osler for eleven weeks, during which time she got much stronger. After leaving the hospital she was much better but could not walk alone owing to legs being weak and her losing control of them. For the past year she has not been so well, merely in not being able to walk so well as before. Cannot stand or walk with eyes shut. The bowels became weak, and to a certain extent uncontrollable, very shortly after getting up from bed and after the legs suffered. Since that time also she has noticed a change in her manner of speaking. Her brother is now twenty-nine years old. His trouble began ten years ago in his legs, coming on gradually. He formerly had many rheumatic attacks. He has weakness in the legs with some loss of control. He can walk with a crutch. His bowels also cannot be controlled properly, but he is "very strong in his arms." His speech also was affected early in the course of his case. The general health good, memory good, intellect unimpaired. The vision seems to be well preserved; hearing is good; appetite is good; no dyspepsia, and bowels move regularly as a rule; no sphincter weakness or spasms. Patient had slight oedema for a short time last summer. She suffers occasionally from nocturnal urination; shortness of breath; no palpitation; no constant cough. Menstrual accession at fifteen, regular, painless. She is well nourished. The tongue protrudes straight and clean. The pupils are equal, normal, react well to light and accommodation. The face is symmetrical and the teeth are in a fair condition. Sensation to touch and pain is equal on the two sides. On the ball of thumbs, two points of aesthesiometer differentiated at one-half inch. Biceps and triceps jerks absent on both sides. Muscu-

lar irritability is well developed. The legs are not wasted. Sensation is apparently good. No formication and no sensation of walking on cotton, etc. Plantar reflex present, knee joints are positive and strongly reinforced on both sides. No ankle clonus. Her speech is slow and hesitating. She has no pain and never had any girdle pain nor fulgurating pains. When she "comes down on her feet hard" she feels as if pins were sticking into the soles. There is no tenderness over nerve trunks. The spinal column is straight and no spinal tenderness. All muscles of legs and thighs respond normally to Faradism, except that a slightly stronger current was required for the tibialis anticus and peroneus longus of left leg; otherwise contractions were strong and quick. No other change apparent. "There is a slight lateral nystagmic movement when eyes are directed strongly to the left. Fixation is unsteady, but there is no lateral or vertical oscillations. Eyegrounds normal. Pupils normal." (Report of Dr. de Schweinitz.)

CASE XI.—Charles A. B., aged 35; admitted to the Orthopaedic Hospital and Infirmary for Nervous Diseases, March, 1905. Bookkeeper by occupation. Father living and healthy; mother died after a confinement; has three brothers and five sisters. One brother and one sister are suffering from the same disease as the patient. One aunt died of tuberculosis, and apart from this there is no history of any disease in the family. Patient's general health has always been good. Had measles and other children's diseases, and at the age of seventeen had typhoid fever. When he was seven years old his parents noticed that he walked in a peculiar manner, often stumbling and occasionally falling to his knees. In walking the toes would touch the floor first and the heels seemed somewhat drawn up. This method of progression became gradually more marked, and between the age of eight and ten he could not bring the heels to the floor at all and walked entirely on his toes. He has always walked very erect, with shoulders thrown back, his abdomen protruded and the spine curved forward. He could not walk at all if stooping. There is no history of pain or disturbance of any of his special senses. He gradually grew worse. Fell oftener when he walked and became weak in his legs. After the twelfth year he began to have contractions of the legs at the knees. If he remained still for any length of time the legs would become stiff, but after a time he could straighten them. From fifteen to seventeen he used crutches, but could walk a little without them. After the attack of typhoid fever, when he was seventeen, he did not try to walk; the contractures became more marked. About this time the arms began to get weak. There was less ability to raise them, but the use of his hands did not become impaired.

Status præsens.—Patient is well nourished, of medium height, has good color. Heart and lungs are normal; abdominal organs healthy. The arms are considerably atrophied, especially the upper arm and shoulder girdle. He can use his hands very well in writing and in helping himself to get about in the wheel chair, but there is distinct weakness in the grip, the dynamometer registering only 25 in either hand. The legs are nearly normal in size, but the muscles are soft and the skin rather shiny in appearance and devoid of hair except in irregular patches. Legs are flexed on thighs almost at right angles and cannot be straightened. In the right foot there is equinovarus to a slight degree. In the left foot there is the same condition, but not so marked. He can move his foot but not his legs, except to a very limited extent. Knee jerks and achilles jerk are both absent; also biceps and triceps jerks. The plantar reflex is preserved. There is no impairment of touch or pain sense. The patient can distinguish immediately when touched by a single point, but when touched with two points the perception is not clear and he is unable to distinguish the number of points ex-

cept when widely separated. Hot and cold are quickly recognized. There is marked lordosis and slight scoliosis. The back is flat and the vertebral sulcus almost gone. The electrical examination by Dr. Boyer is as follows: No reaction of degeneration in any muscles. There is poor response to both Galvanism and Faradism in the deltoids, scapular, biceps and triceps muscles; also in the anterior and posterior thigh muscles. There is a fair response to the Faradic current below the elbows and below the knees. Dr. Holloway made an ocular examination, and the following is his report: OD 6/5, 50 p.p., 12 cm., OS 6/5, 50 p.p., 12 cm., pupils equal, 4.5 mm. in diameter; react normally. Eyes straight under cover. Converges to 3.5 cm. when OD deviates. Various movements of globe full. When eyes rotated to right and left, horizontal nystagmoid movements develop upon nearly reaching the full excursion. Similar movements, but vertical in direction, develop when eyes rotated up. (Believe this result of muscular fatigue and not a true nystagmus.) Muscles orthophoria for distance and near. Abduction 5°; adduction 10°; sursum 2°; media clear; no changes in choroid or retina. Each disc shows good capillarity and does not show any pathological conditions.

CASE XII.—Edward B., aged 29, brother of patient under case XI. Fifth in line of birth. His first trouble was weakness of the back. Patient has not walked since he was 21 years old. Upper arms getting weak for the past seven or eight years. He has never had pain of any kind; he is stout and well nourished. He has perfect use of the hands and arms from the elbows down. His grip is strong; he cannot flex the right forearm; he can flex the left forearm partially and lift the arms from the side 2 or 3 inches. Upper arms and deltoids and scapular muscles wasted, no contractures in shoulder joints, no power in thigh muscles; cannot flex either thigh from the pelvis. Cannot extend either leg, but can slightly flex them; can also flex and extend both feet; no knee jerks; no biceps or triceps jerks. Spinal lordosis, but no lateral curvature. Lumbar muscles not wasted. He was operated upon twelve years ago for appendicitis. Plantar reflex preserved; no clonus; contractures of both knees; right foot has slight contractures; the tendo Achillis is much contracted; the plantar arch is high. Left foot has slight contracture; tendo Achillis contracted; no contracture of plantar arch. Position of right foot that of equinovarus. No trouble with bladder or rectum. Less incoordination than power. Dr. T. B. Holloway reports the following ocular conditions: OD 5/5 without correction; 5/3 with correction; OS 5/5 without correction; 5/3 with correction. O₂: Pupils equal, 4 mm. in diameter; pupillary reflexes normal. No changes in media; discs are vertically oval and of good tint; no changes could be observed in chorioid, retina, or vessels. Ocular movements are full in all directions; convergence good. Fields are normal (fingers). No past or present diplopia. No nystagmus present.

CASE XIII.—Adelaide B., aged 34, sister of patients of cases XI and XII. Second in line of birth. Began to walk late and never could walk like other children. Patient thinks she was always weak and has not walked for five years. Lordosis and right lateral curvature. Left shoulder lower than right. Deltoid, shoulder, and scapular muscles are atrophied. There is tendency to winged scapulæ. The upper arms are atrophied, while the lower arms are well nourished. The grip in both hands is good. Patient can flex left forearm but not right forearm. If the right arm is supported at right angle, she can flex it. But she can extend both. She cannot flex either thigh and cannot extend either leg owing to contractions at knee. Tendency to equinus in both feet is apparent, but no other contracture of either foot. Plantar reflex is present, no ankle clonus, no knee jerks, no biceps or triceps jerks. The menses are without pain and regular—onset was at

the age of 13—no bowel or bladder trouble. She has no dull aching pain in legs from knees down. She runs sewing machine with left foot. She writes and sews, supporting hands in lap, and operates a telephone exchange. Dr. Holloway reports the following ocular conditions: $V_0 = \frac{2}{3}$. Pupils are equal, 3.5 mm. in diameter; react normally, media clear, no evidences of past or present pathological changes in fundus. Ocular movements are full; convergence good. Fields normal (fingers). There is no nystagmus. No past or present diplopia.

1608 WALNUT STREET.

REFLEX NEUROSES, WITH SPECIAL REFERENCE TO THE APPENDIX VERMIFORMIS.*

By EGBERT H. GRANDIN, M. D.,

NEW YORK,

GYNECOLOGIST TO THE COLUMBUS HOSPITAL.

The paper which I beg to offer you, is purely a suggestive comment on certain types of reflex neuroses emanating from the pelvic and abdominal organs, and I hope that I shall elicit discussion of greater value than the more academic paper could prove to be nowadays, when the field has been so thoroughly tilled as to render it difficult to select a title for a paper, or to offer anything novel.

The term neurosis, when applied to obscure symptomatology, has too frequently been deemed by the laity one of reproach, even as has the related term hysteria. The careful clinical observer, however, must admit that more frequently than is generally recognized a lesion oftentimes slight of one organ will cause symptoms in one or another more remote. Witness the varied disturbances dependent upon errors in refraction, or in the coordination of the eyes; witness the protean manifestations of evil import associated with the urinary and the intestinal toxæmias; witness the nervous disorders dependent upon the lesions of the cervix uteri or the pelvic floor, or displacements of the pelvic organs in woman. For my purpose to-night I shall dwell after a clinical fashion upon the rôle played by the coccyx, by the clitoris, by the uterus and appendages, by the kidneys, and by the vermiform appendix in the production of neuroses, selecting instances which have passed under my observation where these organs were the least suspected, and yet were the originators of the symptoms.

No examination of woman should be complete except the condition of the coccyx has been investigated. I am not referring alone to married women, who having borne children have been subjected to the risk of fracture of this organ, but also to the unmarried, since it is in this class I have met with several instances where operations, such as dilatation of the cervix and curettage of the uterus, have been performed by others for the relief of dysmenorrhœa and endometritis without avail, it remaining for me to cure the neurosis by removing a fractured and carious coccyx. Similarly, after protracted neurological and electrical treatment had failed, it has been my fortune to see the neurasthenic and melancholic woman restored

to health and usefulness by the removal of the coccyx. In short, functional uterine disturbances as manifested chiefly by menstrual pain and intermenstrual neurotic spinal and cerebral symptoms not infrequently are dependent upon a diseased coccyx.

While I am not willing to admit that the clitoris is the root of all evil, as some one has termed it, I am satisfied that from it emanate many of the neuroses of childhood, as well as of more mature years. I shall not dwell upon the sexual neuroses which unquestionably depend partly upon this organ, and which, whilst temporarily relieved by titillation, are also thereby intensified. I wish simply to call your attention to the reflex action on the urinary tract as manifested by bed wetting and by frequent micturition, symptoms which in the absence of specific cause in the urine I have time and again both in children and in adults relieved by the trifling operation of circumcision of the clitoris. Formerly I was in the habit of simply stripping back the hood, but now I excise it, uniting the raw surfaces by suture. I would state that on investigation it will be found that in the majority of women the hood is adherent and that under it smegma accumulates, acting as a further source of irritation.

As regards neuroses emanating from uterus, tubes and ovaries, they are manifold, complex, and obscure. As resultants from actual diseases such as retroflexions with descent and fibrocystic degenerations, it is usually easy to reach the diagnosis. It is the border line cases which cause us to hesitate in advising operations or else bitter is apt to be our disappointment. Such operating must almost always be empirical and nowadays, to the credit of the specialty be it said, is a rarity compared with the record of a decade ago. Twice have I been tempted—once to fail and once to succeed. The failure was in the case of an undeveloped girl with marked hysterioepilepsy, the attacks being decidedly aggravated at the menstrual periods. The genital organs were infantile, the menses scanty, dysmenorrhœa intense. Obtaining a written statement from her parents that they understood that the proposed castration was empirical and performed as a last resort, all other methods having been tried without avail, I operated. For about eighteen months the hysterioepileptic seizures disappeared, only to return, however, with renewed force.

The success was an operation performed on a woman committed to an insane retreat for various mental disturbances and hallucinations. Here the suspension of a retroflexed adherent uterus effected a complete cure. You will note the difference in the two cases: In the one no definite disease, in the other a causal factor and an accompaniment of disease.

To pass to the kidney. Unquestionably, when the organ floats, we witness many neurotic symptoms, but I question if during the past ten years, when it has become almost a fad to anchor this organ, operators have not frequently been oblivious of the fact that general depraved nutrition is at the bottom of the neurosis, rather than sagging to a degree of one or another kidney. It certainly surprises me when I hear that one or another surgeon has found occasion to anchor the kidney one

* Read before the Harvard Medical Society, November 25, 1905.

hundred or more times when the opportunities which I have had for clinical observation for over twenty years have presented to me not more than a half dozen movable—floating—kidneys. Take a fat, flabby woman, leading a life of indolence, you will find her crammed with neuroses and you will also find her kidneys measurably displaced. If you begin by anchoring these kidneys, you must complete the cycle by also anchoring spleen and stomach, colon and uterus, for they are also displaced. Even after all this her neurotic symptoms will persist unless you can cause her to alter her habit of life from indolence to activity, and tantamount with the improvement in the general muscular tone, will the neuroses disappear. It is apparent, I think, that except where the kidney actually floats, I am skeptical as to the preponderating rôle played by this organ in the production of neuroses. Far more stress should be laid upon the appendix. Of late years I have been much interested in the study of this rudimentary organ as a factor back of gastrointestinal disturbances, and I select a few histories of instances, operated upon by me, as the main suggested topic for discussion.

Clinically you are all familiar with the male and female neurasthenic, of sallow complexion, coated tongue, abdomen full of gas, which passes in great part upwards, complaining of nausea and constipation and one day of pain over the stomach, and another of pain over one or another iliac region, in short a gastroenteric neurasthenic drifting from one specialist to another, and relieved as little by one as by the other. He becomes the chief source of income of the stomach specialist in the end and yet remains about the same even though his stomach be washed and dipped out and transilluminated, a pitiable object indeed, since even the services if this latest specialist prove of no avail. Such is the type of cases the history of which I proceed to relate to you with the end in view of suggesting that mechanical interference with the function of the intestine may be at the bottom of the symptomatology and that oftentimes the interfering factor is the appendix.

The first case was that of a woman seen about four years ago. Her history for eight years previous is epitomized by the symptomatology I have just laid stress upon. She could digest but few articles, eructations were constant, constipation and tympany were marked. She was a general neurasthenic, and had gone the rounds of a dozen physicians, had ingested many of the drugs in and out of the pharmacopœia, had had her stomach washed most faithfully and had reached the condition where life was no longer worth living. I was called in to rule out the pelvic organs, which I did. A sense of fullness over the cæcum and marked distention over the colon led me to question her closely in regard to the probability of inflammatory attack in this region. She told us that she was always conscious of a fullness there and that she knew her symptoms were relieved whenever her bowels moved freely. Purely empirically I suggested the possibility of some mechanical obstruction here and stated my willingness to make an exploratory section. Permission was granted, the appendix was twisted posteriorly to the cæcum and that organ was adherent to the ileum. I removed the appendix and broke up the adhesions. Within a few weeks her digestive and intestinal symptoms disappeared and with them all her neuroses. Last week, on the fourth anniversary since the operation,

she sent me her and her husband's gratitude for a restoration to a life of usefulness.

A year later I saw in consultation a neurasthenic man with symptoms similar to the last case, who had also gone the rounds of physicians and of drugs. His history brought into relief one factor, this fullness and aching and dragging in the ileocæcal region, and in the light of my previous experience I advised exploration. Along the cæcum I found only a rudiment of an appendix, the ileum and cæcum were united by adhesions. I dissected off the rudiment of appendix and broke up the adhesions. Relief of the symptoms was again seen except those dependent upon lithæmia, which have not been bettered largely because the subject's life is of necessity a sedentary one.

The next case, a young undeveloped girl with aggravated gastrointestinal symptoms not benefited by routine drug and mechanical stomach treatment. Pelvic organs were normal, left kidney displaced about two inches, tenderness on deep palpation and fullness in the ileocæcal region. Diagnosis on my part of catarrhal appendicitis. On the part of another a displaced kidney. This organ was strapped and the rest cure was instituted. The result was negative and as a compromise the kidney was anchored and the appendix removed. The latter organ was reddened and thickened and the tip was attached to the ileum. The pathological report was catarrhal appendicitis. The girl's symptoms disappeared and after three months she had gained twenty pounds in weight.

Another case, the wife of a physician, was a sufferer from similar gastrointestinal disturbances, but she gave a vague history of a mild attack of appendicitis some years previously. Operation revealed what appeared to be a normal appendix, although the pathological report was catarrhal appendicitis. There were no adhesions in this case. The woman's gastrointestinal symptoms were cured.

The *post hoc ergo propter hoc* argument is ever dangerous, and yet I submit that these related instances carry more than a germ of suggestion. We must wonder if, in addition to being a prolific source of inflammatory trouble, the appendix is not responsible through a reflex or through actual mechanical interference with the proper function of the cæcum, ileum, and colon, for distressing gastrointestinal functional disturbances which too frequently the best directed efforts of the stomach specialist and the broader general practitioner fail to cure. The chain would seem to be a complete one. Mechanical interference with function, constipation, colitis, tympany and torpor, dyspepsia and thence varied neuroses. If this be so, I am right; scores of chronic invalids might be restored to health and usefulness through surgical intervention, which, whilst carrying slight risk, may cure a functional type of disease otherwise remaining the *bête noir* of every active practitioner.

116 WEST SEVENTY-SIXTH STREET.

Soluble Preparations of Mercury in the Treatment of Syphilis by the Mouth.—Klotz, of New York, in *The Journal of Cutaneous Diseases*, writes: Whatever predilection one may have for other methods of administering mercury to patients infected with syphilis, there will always remain a number of cases, in which various conditions will leave the ingestion of the drug by the mouth and the alimentary canal the only available method. This can be done as a pill or as a liquid, and with a fluid compound the author had the best results. He has as a rule not used large doses, the usual prescription being 0.15 gramme of the bichloride dissolved in 90 grammes of water.

UTERINE INERTIA AND ITS MANAGEMENT.*

By GEORGE L. BRODHEAD, M. D.,

NEW YORK.

The term "uterine inertia" signifies inactivity or inaction of the uterus. In a broader sense, the term may be used to denote the absence of efficient uterine contraction. On account of this condition labor is prolonged and the danger to both mother and child thereby increased. The subject of protracted or difficult labor in all of its phases is one of very great interest and importance, but in the time at our disposal this evening we shall find it necessary to limit ourselves to the consideration and treatment of those cases of protracted labor in which the power of the expulsive forces is insufficient to effect spontaneous delivery, assuming that the conditions present in any case do not preclude the possibility of normal delivery. Pelvic deformity or disproportion between the pelvis and the fetal head must be slight, malpresentation must be such that spontaneous birth is possible, and, in a few words, it is to be understood that in any case delivery can be effected by resort to the more common obstetrical operations of forceps and version. We shall consider, then, the subject of uterine inertia not complicated by any condition which would necessitate or render advisable any of the major obstetrical operations.

UTERINE INERTIA IN THE FIRST STAGE OF LABOR.

For convenience, let us enumerate some of the causes which are generally believed to be factors in the production of this inertia in the first stage of labor. We have pelvic deformities of minor degree, disproportion, as in the case of a large head with a normal pelvis, malpresentations, hydramnion, twins, premature rupture of the membranes (so called dry labor), abnormal deficiency in the quantity of amniotic fluid, obliquity of the uterus, pendulous abdomen, primiparity, and more especially primiparity in elderly women, rigid cervix, adhesion of the membranes, highly nervous temperament, general muscular debility associated with anæmia, wasting diseases, etc., distended bladder and rectum, vesical calculus, ventrofixation of the uterus, and fibroids of the uterine wall.

Some of these causes need not detain us long. Obliquity of the uterus, for example, if present, should be rectified, and a binder properly applied. If the abdomen is pendulous, the uterus should be held up by means of an abdominal binder, supported by shoulder straps. With some patients, in my experience, more can be accomplished by allowing them to remain in bed, the uterus being held up in its normal position, during the periods of contraction. It would seem to be unnecessary to call attention to the fact that both bladder and rectum should be well emptied during labor, and sometimes uterine inertia is apparently traceable to these causes, a full bladder in particular causing much needless suffering and consequent loss of uterine activity. Adhesion of the membranes to the uterine wall has been mentioned by some writers as a cause of inertia in the first stage of labor, but I do not

remember to have met with any instance of this kind. As a rule, these adhesions are easily broken up, and I have never seen a case where delay has been caused by them. Vesical calculus is a very rare complication of labor, but in the event of inertia from this cause resort must be had to surgical procedure. Malpresentations should be corrected, if possible, early in labor, but in the event of failure, the usual treatment of inertia should be followed, in the hope that safe delivery may result. In order to ascertain the effect, if any, of twin pregnancy on the duration of labor, I have carefully examined the records of the last 2,500 cases of labor in the service of the Post Graduate Hospital. There have been in all twenty-eight cases of twins, an average of one in eighty-nine labors. Twenty-four of the patients were multiparæ, and four were primiparæ. The average duration of labor in women who were confined at or within one month of full term was in nineteen multiparæ nine hours and thirteen minutes, and in the four primiparæ eighteen hours. The average of nine hours in the multiparæ is considerably below the average, which Veit and Spiegelberg give as twelve hours, and it is well within the seven to eleven hours, as given by Edgar. Again, the average of eighteen hours for the primiparæ is below the twenty-four hours of Veit, it is only one hour longer than the seventeen hours recorded by Spiegelberg, and two hours longer than the maximum of sixteen hours stated by Edgar. From these figures it would seem that in multiparæ twin labor is only rarely a cause of uterine inertia, while in primiparæ labor may be slightly prolonged by it.

All will admit that primiparity is a potent factor in the prolongation of labor, but in our experience labor in primiparæ who are advanced in years has been but little different from that at an earlier age. Ahlfeld states that in his experience labor in elderly primiparæ is prolonged on an average of seven hours, but Edgar, in his recent textbook, coincides with us.

The subject of dry labor has always been of great interest to the writer, and he has kept careful records of all such cases occurring in his practice, in order to note both the effects of the premature rupture of the membranes on the progress of labor, and also the effects, if any, on the child. A few figures with reference to the duration of labor in these cases may be of interest. Of forty-four cases of so called dry labor, there were eighteen in primiparæ and twenty-six in multiparæ. The average duration of labor in the eighteen primiparæ was only thirteen hours and twenty-seven minutes, while in the twenty-six multiparæ it was seven hours and twenty-three minutes. The shortest dry labor in the primiparæ was of three hours' duration, the longest twenty-two and one half hours; in the multiparæ, the shortest one hour and five minutes, the longest twenty-four hours. If we add to the list of the eighteen primiparæ three other cases of protracted labor seen for the first time in consultation, one of which was a patient with justo-minor pelvis which required craniotomy, and the longest of which was nearly fifty-two hours, the average duration of labor is still only seventeen hours. From these figures we must infer that the premature rupture of the membranes is not an important factor in the

* Read by invitation before the East Side Physicians' Association, October 20, and the New Rochelle Medical Society, December 11, 1905.

production of uterine inertia. It does not necessarily follow, however, that because many of these cases are not prolonged that the premature rupture of the membranes is of small importance. Dry labor is, as a rule, more painful, is more likely to be attended with cervical laceration, and the fetal mortality is increased. These cases, therefore, must be carefully observed, for, in my opinion, labor cannot be allowed to proceed, with safety to the child in particular, as long a time as in normal labor.

But the most important causes of uterine inertia are found in primiparæ, especially when associated with unusual development of the muscular system, as in athletic young women; or, on the other hand, with general muscular weakness, complicated by anæmia, albuminuria, or intercurrent disease. Again, we have pelvic contraction of minor degree, disproportion, and unfavorable presentations, such as occiput posterior or face. A highly nervous temperament seems also to predispose to uterine inertia.

The treatment of inertia has for its object three purposes: First, to sustain the general condition of the patient; second, to stimulate the uterine muscle and dilate the cervix, and, third, to produce relaxation and sleep. The general condition of the patient is to be kept up by giving easily digested fluid nourishment every two hours, with stimulants if the patient's condition demands them. The patient is to be kept out of bed as much as possible, without, however, insisting upon this to the point of great fatigue. Periods of rest in bed are necessary and admissible. To stimulate the uterus, I have relied chiefly upon strychnine and quinine, giving the former in doses of one thirtieth grain every two hours, and the latter in doses of five grains every three hours. In some instances the use of these drugs has been followed by stronger uterine contractions, but in many other cases no good seems to have been accomplished by their use, even after large amounts have been taken.

We come now to the consideration of the probably most valuable agent at our command for the treatment of uterine inertia. I refer to the use of the Champetier de Ribes bag in its present modified form. The great value of this instrument lies in the fact that not only is the uterus stimulated to stronger contraction, but the cervix is dilated as well. These bags, which may be purchased at small cost, are of four sizes, are cone shaped, made of canvas, and covered with a coat of rubber. At the apex of the cone and joined firmly to it is the tube, made of the same material, through which the bag is filled with a sterile solution, and by which traction may be made upon the bag, the joint at the junction of tube and bag being sufficiently strong to allow this. If pains are infrequent and inefficient, we select a bag which is somewhat larger than the cervical opening, and, after proper sterilization, we introduce it into the lower uterine segment. The bag is then completely filled with boiled water, a normal salt or a weak lysol solution, the tube is firmly tied to prevent leakage, and if contractions do not become stronger and more frequent, traction is made upon the bag every fifteen or twenty minutes. After a short time this bag will slip out, and then, if necessary, a larger one can be introduced, and further traction made. Excellent results have followed the use of these bags, which

are especially useful in dry labor and in face or breech presentation. Furthermore, they are not only useful in the treatment of uterine inertia, but, in our opinion, are also the best method for the induction of labor. To promote relaxation and produce sleep, chloral, morphia, chloroform, or ether may be administered. When, after many hours of pain, the patient becomes thoroughly exhausted, the administration of chloral in twenty grain doses by mouth or rectum, repeated at intervals of one half hour, once or twice, will frequently give the much needed rest. Morphine may also be used, but its effect seems to us to be less beneficial than chloral, for the reason that chloral appears to relax the cervix more than morphine, and the patient does not remain under its influence for as long a time as with morphine. After the patient has rested well, the use of strychnine and quinine should be resumed. In a certain number of patients, especially those of the highly nervous type, I have seen the use of light chloroform or other anæsthesia attended with excellent results. As a rule, it is better to withhold anæsthetics as long as possible, but in some cases their careful use in small quantities has seemed to give good results. At the beginning of a contraction, a few drops of chloroform, for instance, are poured on the mask, and I have seen patients who had accomplished practically nothing for some time begin to help themselves and make good progress. Should all of these measures fail, then the membranes should be ruptured. This procedure in a certain number of cases is followed by speedy delivery. In hydramnion, for example, the rupture of the membranes may be followed by strong contractions. Failing, again the cervix should be completely dilated, manually, and further treatment carried out as indicated in the consideration of uterine inertia during the second stage of labor. In rare instances the cervix is so rigid that dilation is impossible, and incisions must be made or vaginal Cæsarean section performed.

UTERINE INERTIA IN THE SECOND STAGE OF LABOR.

This is due usually to the same causes which have already been alluded to. In addition, we have moderate contraction of the bony outlet, and more frequently we meet with a small vagina and an unyielding outlet.

Reference has already been made to the forty-four cases of dry labor occurring in the writer's practice. In the treatment of the second stage in these patients the low forceps operation was used in ten of the eighteen primiparæ, but only three times in the twenty-six multiparæ, version being used twice, once for placenta prævia and once for prolapsed cord. In the large majority of these cases the operation was easy and attended with good results. In the treatment of this stage of labor we are guided naturally by the conditions present. The patient should be shown how to make the best use of her muscular forces, and encouraged to bear down properly. If the patient suffers greatly with each pain, light anæsthesia may give good results. Occasionally a little whiskey or brandy will stimulate the uterus to better contraction. In spite of all treatment it is often necessary to deliver the woman, and this brings us to the choice of operations.

Presentation, position, and pelvic measurements being normal, with the head above the brim, and

especially in dry labor, the writer prefers to apply forceps rather than to perform version. While admitting that the choice between forceps and version under these circumstances is perhaps a matter of personal equation, I believe that slow, careful extraction by forceps will be attended by better results than the performance of version. In cases of justo minor pelvis or where the foetal head is large, the forceps operation is much the better, for the forceps can accomplish what version can never do—namely, the molding of the foetal head, and it is only by being molded that the head can pass through the pelvis safely. In flat pelvis, on the other hand, version would be the operation of choice, for the forceps holds the head in the median line of the brim, and it is at this point that contraction exists. After version, the occiput slips off to one side of the pelvis, and a narrow diameter passes through the conjugate of the brim. Where the breech presents, whether above or below the brim, a foot should be seized, traction made, and the child extracted in the usual manner. With face or other malpresentation above the brim, podalic version should be performed. In vertex or head presentation, the head having come down into the pelvis, the forceps should be applied and the head extracted, rotation of the chin or occiput to the front having been accomplished by manual or instrumental means.

Although it is very hard to lay down any fixed rule as to when, in the second stage, the head being low down, forceps should be applied, the writer has usually applied forceps if there has been no advance for one hour. In dry labor, the forceps should be used earlier. My rule is to use instruments if after one half hour in the second stage there has been very little or no advance. In looking over my records of forceps cases I find that in primiparæ the low forceps operation has been used in about fifty per cent. of all labors, while in multiparæ in about twenty per cent. The writer frankly admits that his experience leads him to believe in the use of forceps if after a reasonable time there is no advance. The patient is saved hours, perhaps, of needless suffering, and when the operation is carefully performed there is no danger for mother or child.

UTERINE INERTIA IN THE THIRD STAGE OF LABOR.

This manifests itself in either of two ways: First, retention of the placenta, and, second, in hæmorrhage. The condition often follows inertia in the preceding stages, but it may also occur after a precipitate labor, or if the uterus is the seat of new growths. In the case of precipitate labor, the power of the uterus seems to have been expended in one or two strong expulsive contractions, the result of which is that it becomes greatly relaxed, and hæmorrhage from this cause is at times very profuse. When there are fibroids in the uterine wall, the normal involution or rearrangement of the muscular fibers is interfered with, relaxation and hæmorrhage resulting. The prophylaxis of uterine inertia in the third stage naturally consists in the prevention of the same condition in the preceding stages, but great stress should be laid upon the importance of having the uterus followed down carefully during the birth of the child. Again, the uterus should be carefully observed during the entire third stage, for, if the fundus is kept at the

level of the navel, and if the uterus is massaged during periods of relaxation, inertia will be prevented in many cases. If, on the other hand, the fundus is not held, the uterus may become greatly relaxed, and hæmorrhage result. In a number of instances I have known serious post partum hæmorrhages to have taken place within the uterine cavity, very little blood having escaped from the vagina. Had the uterus in these cases been properly observed, such blood loss could not have occurred.

The treatment of retention of placenta need not detain us long. In the absence of hæmorrhage a number of attempts should be made to cause firm contraction of the uterus, in order to use the *Credé* method of expression. Unless bleeding is profuse, we advise waiting at least one hour before resorting to manual extraction. The operation must be done under strict antiseptic precautions, for the possibility of septic infection at this time is very great. The hand should be carefully introduced, muscular contraction, if present, overcome by gentle pressure, and after thorough separation of adhesions, the placenta is seized and extracted.

The treatment of post partum hæmorrhage is one of the most practical subjects with which we are called upon to deal. Prophylaxis consists in the proper management of the uterus during the latter part of the second and the entire third stage of labor. Should hæmorrhage occur in spite of vigorous massage, the placenta should be removed at once, by expression if possible, but by hand if necessary. Knowing that portions of retained placenta may cause continuance of bleeding, it is very important to be sure that the uterus has been thoroughly emptied. There are many ways of treating post partum hæmorrhage, but one becomes accustomed to a routine procedure which, from personal experience has been found to be effective. In a few words, I will outline the plan which has given me good results. As soon as the uterus has been emptied, ergot should be given by mouth, or, if the hæmorrhage is alarming, by hypodermic injection, and massage of the uterus kept up vigorously. Usually a hot vaginal douche of normal salt or weak lysol solution, given at a temperature of 116° F. will be sufficient to check the bleeding. If not, the douche nozzle is carried up into the uterus and a uterine douche of the same solution at the same temperature is given. Hæmorrhage continuing, we give a hot uterine douche of a two per cent. solution of acetic acid. For this purpose we carry with us in our outfit a four ounce bottle of the Squibb eighty per cent. acetic acid, two ounces of which added to three quarts of water will make a solution of requisite strength. If acetic acid fails, and there have been very few instances in our experience where it has failed, the uterus should be tightly tamponed with plain sterile or a five per cent. iodoform gauze. If one is unprepared to pack the uterus a piece of ice may be carried up and rubbed about in the cavity of the uterus, a procedure which is occasionally followed by firm uterine contraction. Some obstetricians prefer a weak iodine solution instead of acetic acid. There are many other plans of treatment advised by various authorities which time will not allow us to consider. In emergency, when there are no provisions for douch-

ing or packing, if massage fails to control the bleeding firm bimanual compression of the uterus should be made.

The after treatment of uterine inertia consists in the use of tonics and stimulants, especial stress being laid on the great value of hot saline enemata in cases where hæmorrhage has occurred. Where blood has been lost patients need and should be given at once, heat, fluid, and stimulants, all of which can be quickly and easily supplied by these enemata. The response which is made to this treatment is sometimes little short of marvelous.

UTERINE INERTIA IN THE PUERPERIUM.

Not infrequently uterine inertia in the puerperium is met with, subinvolution of the uterus resulting. It is surprising to note the careless way in which the puerperium is often managed. Some physicians make no examination whatever during the period of convalescence after childbirth, and women are allowed to get up out of bed and go about with a large uterus, which is very likely to give trouble—if not at once, certainly a little later. Every patient should be carefully examined before she is allowed to take up her usual mode of life. It is my rule to make a thorough examination in the third week, and if the uterus is larger than it should be, hot douches and ergot are ordered, and the patient advised to keep as quiet as possible. If the uterus is displaced backward, in addition to douches and ergot, the patient is instructed to use the knee chest position, and to lie on her side and face as much as possible. If these measures do not cause involution, tampons of ichthyol and glycerin or of boroglyceride are applied every other day. After proper involution, the displaced uterus is held up by the use of a pessary.

I am convinced that the trouble in a large number of gynæcological cases is directly traceable to the lack of proper treatment in the puerperium, and in closing I would make a strong appeal for more careful observation of women during the month following confinement, for upon such care depends to a large extent the future comfort and welfare of our patients.

110 WEST FIFTY-SEVENTH STREET.

THE PATHOLOGICAL PHYSIOLOGY OF TYPHOID FEVER.*

By JOSEPH H. BARACH, M. D.,

PITTSBURGH, PA.

In studying the pathology of a disease, we have the pathological physiology and the pathological anatomy for consideration. The pathological anatomy of most diseases is distinctive, certain changes being constantly found in certain diseases. The pathological physiology is not so clearly understood; it involves many processes that have not yet been unravelled. To include in its entirety the study of an individual disease, we should consider the specific cause, how it gains entrance and becomes active in the human body, under what condition it can become active, what activities are set up during and after the course of the disease.

Thus we shall consider first the specific cause, and only in the sense that concerns its activities. The typhoid bacillus is the specific cause of typhoid fever, it gains entrance to the human body and multiplies luxuriantly. One bacillus within twenty-four hours may have multiplied into millions. This organism lives and grows outside and within the human body; thus it is saprophytic and parasitic. Usually it does not cause suppuration, at times it does, making it pathogenic and pyogenic. It is a tenacious organism. Under conditions found in the human body it thrives well, under unfavorable conditions of temperature and soil it resists destruction long.

With these few hints about the bacterium, we will go to the second consideration. How do the typhoid bacilli gain entrance and become active in the body, setting up the disease? One of the most interesting questions in the study of disease of to-day is the exact relation between the seat and entrance of bacteria into the body and the site of their subsequent activity. For example, whether pneumonia is primarily a bacteriæmia with subsequent invasion of the lung, or whether it is a primary invasion of the lung. Whether the tubercle bacillus usually enters by the gastrointestinal tract and has its end process in the lung, or whether it enters the lung primarily by the lung passages. In the consideration of this disease, whether the typhoid bacilli enter the lymphoid structures in the wall of the intestine and grow and multiply there, thus causing a toxæmia, or whether they enter the circulation directly, setting up a general condition, while the lymphoid structures in the wall of the intestine suffer as only a part of the lymphoid tissues in the body. In this disease a third consideration is also held, and that is that the disease as a whole is from both the general and local sources of infection.

The evidences that we can bring to bear toward solving the question are: 1. Bacteria when ingested have been found three hours later in the thoracic duct, showing that the diffusion is rapid. 2. The typhoid bacilli are found in the blood in 60 to 80 per cent. of the cases during the disease, and they probably are distributed to the various organs of the body in (nearly) every case. These germs when cultivated are found to be active and virulent, and we have every reason to believe that their behavior is the same in the blood and in the internal organs. 3. A toxine that might be liberated from the intestinal lesion has not been found in this disease, and what we do know of the life of this organism tends to show that its poisons are retained within the cell body under ordinary circumstances. 4. If the intestinal wall was the main seat of activity in the disease, we should not have, as we do, fatal cases of typhoid with only slight lesions in the Peyer's patches and solitary follicles. 5. There are times when the lymphoid tissue suffers most in the mesenteric glands, in the spleen, and in the intestine. 6. The fact that the certain pathological stages are found to exist at about the same time in the various lymphoid tissues strongly suggests that they have begun about the same time, and had a common source of infection—the blood.

* Read before the West Pennsylvania Medical Society, November 10, 1905.

On the other hand, points in favor of the importance of the local lesion are, that the intestinal lymphatic tissues are the more constant seats, and the lesions are more extensive; but may it not be due to some anatomical (and physiological) reason, such as might be furnished by the peculiar distribution of the lymphoid cells, the connective tissue reticulum, and the vascular elements, or some physiological state, that the bacilli here cause such a local disturbance? Another point in favor of the importance of the local lesion is that the mesenteric glands nearest the ulcers are found to be the most enlarged, but this may easily be due to the retention of poisonous debris passing from the intestinal lesion.

These evidences as a whole, I believe, tend to show that typhoid fever is dependent mostly upon the bacteriæmia, and that the lymphoid structures are the local seats of greatest pathological activity, as in rheumatism the joints, as in scarlet fever the kidneys, and as in measles the mucous membranes.

Our next consideration is: "Under what conditions do the typhoid bacilli become active in the body?" This is at present a phenomenon. Are bacteria at times virulent and at other times not? Is the human body always susceptible to bacterial invasion, or only at times?

Bacteria are at times more virulent than at other times; but, in the diseases in which this question is of most importance it has been practically solved. For the diphtheria bacillus, the tubercle bacillus, and the pneumococcus, when taken from the mouths of healthy individuals, and cultivated, have been found as active as those taken from the diseased body. So it does not seem within the power of the bacteria themselves. If not in the bacteria, then is it in the tissues of the body? Probably yes. This is the question of natural immunity. Natural immunity exists so long as there is a normal and physiological state of the solids and fluids of the body. Just what constitutes this state, the evidences which we have are not sufficient to decide positively. The nearest that we have toward the solution of these complex processes is in Metchnikoff's phagocytic theory and Eherlich's side chain theory. Surprisingly they are quite different from each other.

What activities are set up in the body. The rôle played by the typhoid bacillus on its entrance to the blood is a complicated one. It is alleged by some authorities that the typhoid bacillus in the blood gives off a toxalbumin; and that toxic substance, or typhotoxine, as it is called, is the main acting poison in typhoid fever. Others say that the true toxic substance is *not* given off by the living bacterium, but remains within its body until the bacillus is destroyed. There are so many unknown factors entering into such a problem, that with the evidences of the present time we are not justified in drawing definite conclusions.

Cultivating the typhoid germ under certain conditions, some experimenters have been able to isolate a product, which when injected causes symptoms and lesions akin to the disease. Others in the attempt to do the same have failed. Under certain conditions, experimenters have been

able to isolate a product from culture media which is of itself a bacteriolysin, and when injected into animals produces an agglutinating power in the blood. That is, this product which has been obtained from the culture media when injected into animals imparts a bacteriolytic power to the blood and sets up a temporary immunity. The same results have been obtained in man also.

If we understood more fully the relation between the leucocytes, bacteria, and toxins, we could come to conclusions that way, but as it is we may be right or wrong in our speculations. For instance, in certain diseases where the disease is purely from a toxin liberated by the bacterium, we have practically no leucocytosis. In others where we believe there is no soluble toxin produced, the leucocytosis is marked. If these relations were constant, typhoid fever in which there occurs no leucocytosis might be classed with diseases dependent upon toxins. But there are objections to this supposition, and as it is today we do not know whether the disease is set up by a product from the living bacterium or from the disintegrated one.

Whatever be the exact modes of action of the typhoid bacillus and its products, the results are definite. Beginning at about the eighth day of the disease the blood shows a distinct bacteriolytic power. That is, the power of inhibiting the growth of the bacteria and destroying them. This is distinctly shown in the Widal reaction when the blood from a typhoid patient is brought in contact with a liquid culture of typhoid bacilli; these bacilli will clump together and finally be destroyed. Such agglutinating actions are seen in other infections also, in pneumonia, cholera, tetanus, and other diseases. It is the result of acquired immunity. Natural immunity to typhoid must be rare in man, in animals it is the rule. Thus in typhoid fever as in all other infections, nature produces antagonistic products, and these usually are sufficient, overcoming the disease in the usual length of time. Sometimes the struggle is greater, the bacterial poisoning being a severe one or the vitality is low, then the outcome depends upon which is the most powerful, the assault or the resistance. This struggle on the one side by the human body and on the other side by the bacteria, results in the various pathological processes which characterize the disease. These actions and reactions are the cause of increased metabolic changes. We witness acceleration of the physiological actions. There is increased cardiac action and increased respiratory function. In the metabolism, the anabolism is far below normal, the ability to assimilate nourishment being slight. Catabolism is very marked, first there is a loss of fats and then the proteids are used up with marked rapidity, a patient ordinarily losing from one fifth to one third of his body weight. Secretions are subnormal, excretion does not keep up with waste production. Not only is there the poison from the infection to be carried off, but there are the waste products of the increased metabolism to be carried away also, making the toxæmia a dual one and taxing the excretory organs to their functional ability. The various symptoms that occur during the disease

are due to the action of the poisons upon the tissues or upon the nervous elements of the body.

In accordance with the law of the correlation of energy, that increased molecular motion causes increased heat production, so is it here. The distance of the dot on the temperature chart above the normal black line, designates the degree of morbid cell activity from the normal state in the body of the patient.

Thus far we have mostly considered what is known of the morbid reactions set up in the blood, and here is truly where the study of the individual disease begins. The poison has entered the blood, the reactions manifested in function, due primarily to the toxic action upon the nervous system, give rise to the pathological physiology of the disease. And the reactions manifested in structural tissue change is the pathological anatomy. Here we have to do with altered function. How intricate and complex these altered functions are we soon find on considering examples of them.

Let us take, for example, the ingestion of food and see from it how the normal physiological functions are replaced by the abnormal. First of all, there is in this disease anorexia, mostly because of the toxic effect of the blood upon the nervous system supplying the stomach. But if food is taken, should it be solid food, then it will fall short of being masticated properly, on account of the inability of the muscles of mastication, the salivary secretion being affected will not prepare it well for the stomach, in the stomach it will find a lack of digestive principles and subnormal activity of its walls. Thus, unchewed and unmixed properly, it would finally be propelled along to the intestinal tract, there to be at the same disadvantage, intestinal, pancreatic juices, and bile abnormal or subnormal, or both. Having proceeded along this far, either a very small proportion of sufficiently or a larger proportion of insufficiently digested material, is ready to be taken up by the lacteals into the circulation and into the liver. The liver being nourished by toxic blood, how can it carry on its secretory function, more so when it has abnormal material to work with. This being true, what must be the character of the blood as it enters the right heart, and the lungs. Can we have sufficient oxidation in the lungs with the presence, not only of insufficient normal constituents, but of toxic substances also? Therefore, the blood leaving the lungs which should be pure, and contain sufficient nourishing material, is impure and impoverished. Thus you clearly see how this vicious circle is established, and how the entire system is at once poisoned by the infection. Being a circle, no matter at which part of its path you start, you will ever come back to the same point. The above is as true of the respiratory, of the digestive, of the circulatory, and of the nervous systems.

Such perversions of physiological function exist in all acute infectious diseases, and in proportion to their severity. There are, however, those which characterize typhoid fever: The affection of the lymphoid tissues, of the intestines, mesentery, and of the spleen. Why the typhoid bacilli choose these as sites for their activity, especially

the Peyer's patches and solitary follicles, is not known, other than, perhaps, for some anatomical reason that exists in the peculiar distribution of the lymphoid cells, the connective tissues reticulum, and the vascular elements, which would allow foreign bodies to stagnate, such as bacteria; or, because of some selective action that exists between the bacteria, lymphoid elements, or leucocytes.

The course of the typhoid fever is characteristic, the ascent, fastigium, and descent, its usual length of time and the greater remissions of the third week. As to understanding this, we must await first the true solution of the problem, "Immunity."

The rose spot may be considered the exanthema of typhoid fever. It seems to be a temporary vasomotor paralysis, limited to minute areas. It was supposed that this is due to invasion by typhoid bacilli, but this is not so, since it has been proven that typhoid bacilli can be isolated as frequently from the blood of other parts of the body.

The characteristic intestinal symptoms are due primarily to the local lymphoid manifestation, and, secondarily, to the general toxæmic condition. The characteristic complications of typhoid fever, hæmorrhage, and perforation are explainable on purely physical principles. With hæmorrhage the temperature falls, and stays down, or rises again, depending on how late or early in the disease the bleeding occurs. After a patient has lost a certain amount of blood, there is nearly always seen a marked amelioration of the nervous symptoms, if not masked by the opium that is administered so often, undoubtedly because of the lessened toxæmia. The reaction of the system to the bleeding is the same as in other internal hæmorrhage.

Perforation is the most serious accident of typhoid fever, and its consequence depends much upon the nature of the local infection and the time and manner of operation. If typhoid and colon bacilli only are poured out into the peritoneal cavity, the danger is not so great, because the system by that time has already acquired a partial immunity against them. Should the organisms be streptococci and staphylococci, the outcome is extremely doubtful. Nature is already combating with one infection, and when another comes along, so severe as this, it seems to be rendered helpless.

There is one end (?) product that occurs also in other diseases, but is more constant in typhoid fever. Its character is unknown, but with diazo-benzolsulphonic acid its presence is indicated, the diazo reaction. This substance is probably a katabolic product. When it occurs in other conditions than typhoid fever, there is nearly always marked tissue destruction going on. I have found it present in far gone cases of tuberculosis, in advanced carcinoma with rapid emaciation, in the early stages of scarlet fever and spreading cellulitis when the pulse and temperature were running high, in pelvic cellulitis, in sapræmia, and in one case of multiple arthritis. In 1,500 specimens of urine from patients other than typhoid, I found the reaction in eleven cases, while in 224 speci-

mens from patients of typhoid fever I found it present in 86.75 per cent.

A recrudescence is a sudden rise in the temperature which lasts one or several days, and may be caused by mental or nervous disturbances, digestive disorders, or other accidental occurrences. The relapse of typhoid consists of a more or less typical recurrence of the disease. The temperature, which had been down, with the onset of the relapse rises quickly, new crops of rose spots come on and the spleen becomes enlarged again. The pathological physiology of this is little understood, and it would be most interesting to know why a patient who has run a regular course, or whose course seems to be terminating, should, through some indiscretion in diet, or through some physical or mental exertion, or without any apparent cause, lose his immunity and suffer a reinfection. The fact that the typhoid bacilli are so often present in the stools and urine of convalescing patients when no relapses occur, suggest that this relapse is not so dependent upon the presence of the bacteria as upon the loss of immunity.

Immunity, as we comprehend it, demands a relative physiological state for its existence. The causes that we can cite as being responsible for relapses we know to be transgressions of the physiological laws, and in those cases in which relapses occur without any apparent cause, are not of necessity due to an utterly unknown cause, but may very easily be due to a condition which would be perfectly understood if it were recognized. All considered, we may conclude that ordinarily at the end of the third week there is a protective factor of immunity established, and that this is active so long as there are no marked disturbances. The real character of this protective state—"Immunity"—is unknown.

The convalescence of typhoid fever seems to be the act of physiological restitution. There is for a time a tendency to subnormal functional activity, the pulse may be between 50 and 60, the temperature one or more degrees below normal, the patient sleeps much, and with all these there is much hunger for food. Soon the marked emaciation gives way, and the patient begins to fill out as he was before the disease, but the anabolic process does not cease here, especially in the younger patients, who become fatter than they were before the disease.

We have one more consideration, "What activities occur after the course of the disease?" Some of these come under the consideration of the different systems, and the one which we will consider separately is arteriosclerosis. The causative factors of arteriosclerosis are included mainly under malnutrition, toxic action, and cardiovascular strain, and in this disease, typhoid fever, we have an excellent combination of all these that are required to produce the condition. The condition is not likely to be established during the course of the disease, but it can undoubtedly begin here and make good headway. With degenerative changes begun in the intima and media of the vascular system, should increased arterial tension be kept up for a considerable

time, or the action of toxic substances endogenous or exogenous exist, or should the patient suffer from malnutrition with its effects, arteriosclerosis would be very prone to establish itself.

From the foregoing, it may be seen that the pathological physiology of typhoid fever is only partially understood, and the same is true of all acute infectious diseases. In concluding this consideration of the subject I wish to say that I believe:

That the evidences of to-day are sufficient to establish the modern idea that typhoid fever is a disease dependent essentially upon the bacteræmia.

That the Peyer's patches and solitary follicles are not the sources from which the typhoid bacilli are sent out into the circulation, but that their marked involvement is due to their peculiar histological structure or to some physiological relation that exists between the typhoid bacilli and the lymphoid elements.

That perforation with the ordinary pyogenic infection, staphylococci and streptococci, is so much more dangerous than with the pathogenic infection, because to the latter there is already a partial immunity established.

That the diazo is a reaction to an end product, the result of rapid tissue destruction which is characteristic of all marked cases of typhoid fever, and of those other diseased conditions in which the reaction occurs.

4502 FIFTH AVENUE.

A SIMPLE INSTRUMENT USEFUL IN X-RAYING A STRICTURE OF THE ŒSOPHAGUS.*

By SWITHIN CHANDLER, M. D.,

PHILADELPHIA,

SURGEON, GARRETSON HOSPITAL; GYNÆCOLOGIST, CHARITY HOSPITAL.

Such a paper coming from one who is an abdominal surgeon or gynæcologist only emphasizes the adage that one ought to be a general practitioner before one is a specialist. One oft-times must leave his field of work and give attention to other specialties in an emergency if he desires to be the most useful and does his duty. It is not always possible, however, much as it may be desired, to call the specialist into the field other than his own. Such a condition confronted the author of this paper when he was visiting a small town quite a distance from a large city. The case with the history is cited in order that it may be better understood and bring the point to the consideration of those present to-night.

CASE.—The patient was a white man of 56 years of age, living in a small town in a country district. Family history: His father died from a cancer of the stomach. The previous personal history is negative.

Present Attack.—One year previous he began to have difficulty in swallowing; eructated his food and then continued to grow worse. He had pains in the stomach and the intestines were filled with gas, and suffered from increasing tendency to constipation when seen

* Read before the Charity Medical Society of Philadelphia.

in 1904. He had dizziness, shortness of breath, palpitation of the heart, anorexia, and even an abhorrence to eating, living on liquid food. He had intense intestinal pain and fermentation; he had had no action of the bowels for two weeks, yet there was much distress from desire to evacuate the bowels; he micturated frequently. The color of the urine was yellow, the patient was feverish, much emaciated and weak, and still unable to swallow solid food. Blood, coffee ground in character, was eructated with a foul smelling serum. After salts were given, the physician diagnosed the case as cancer of the stomach, with obstruction at the pylorus. For this condition the author was called to do a gastrointestinal anastomosis. A suggestion that a stricture of the œsophagus might exist was followed by passing a Mixer's bougie, and the stricture was found to be present. As it was deemed advisable to know the size and character of the said stricture of the œsophagus a loop of string was tied to a smaller homemade bougie near its end. First the Mixer bougie was engaged; after this had passed the stricture, the loop was placed over the handle of the passed bougie and the made bougie also engaged. When it met the obstruction, the two handles were tied together and both instruments withdrawn. They gave the exact measurement of the stricture, our diagnosis being a cancer of the œsophagus, and from the measurement with other conditions, which were present, it was determined that no operation was advisable.

Thus one will see the truth of the opening words that one should be prepared for forced work in other fields. At the time of the examination there was given out the suggestion of the simple instrument presented this evening. It is, namely, that a ring be fastened to a small bougie instead of a string which was previously used. Its usefulness can be seen at a glance (see photo-



Instrument in x raying a stricture of the œsophagus.

graph). Not only can a measurement be taken with such an instrument in place, but an x ray photograph or radiograph may be accomplished, the method being to engage an ordinary bougie with a long handle until the bulb passes the stricture; then place ring attached to the other bougie over the handle of the first and gently engage the second bougie, sliding ring down to handle of first bougie until the second bougie is arrested by the stricture or obstruction. The ring holds bulb of second bougie in place, and by gentle traction we hold bulb of first bougie up against the stricture or obstruction from below and thus

we have two metal bulbs, one above and one below the stricture or obstruction. These are easily photographed by the x ray and give an accurate size of the stricture or obstruction. We can also make the second bougie hollow and make direct application to the stricture or obstruction.

2010 CHESTNUT STREET.

A CONTRIBUTION TO THE CAUSATION OF ENCHONDROMA OF THE UPPER PORTION OF THE FEMUR.*

By C. O. THIENHAUS, M. D.,

MILWAUKEE, WIS.

The following case is of more than usual interest to the general practitioner. 1, Because of its rarity; 2, because it shows that in many cases of tumors of the femur, although all clinical symptoms point strongly to the diagnosis of sarcoma, a microscopical examination should be made before informing the patient definitely that he is suffering from malignant tumor and that nothing less than a speedy exarticulation in the hip joint can save his life. Especially is this true when a tumor is situated in the region of the major trochanter, as can be seen from the reasons given below.

Mr. P., a patient, from Sullivan, Wis., referred to the Postgraduate Hospital by Dr. K., of Concord, Wis., states in the anamnesis that since one year he noticed a growth on the upper portion of his left femur which was increasing quite rapidly within the last two weeks. Although not suffering from much pain it recently was a source of much discomfort, chiefly in attempts of flexion of the leg in the hip joint as during walking. Furthermore, in the last weeks he began also to notice a great deal of numbness in his leg.



Fig. 1. Enchondroma of the trochanter major.

The examination of the patient revealed a tumor as large as a man's head, of hard consistence, broadly attached to the posterior portion of the major trochanter and the linea aspera and extending down to the femur for about twenty centimetres. The space between

* Demonstrated before the Milwaukee County Medical Society.

trochanter major and the tuber ischii, as may be seen in Fig. 1, was entirely filled out by the tumor. The numbness of the leg, of which the patient was complaining, could be undoubtedly explained by the pressure on the ischiatic nerve. At first glance the tumor seemed to be attached to the tuber ischii also, but during flexion of the leg in the hip joint it followed the motions of the femur and the possibility of attachment to the tuber ischii could therefore be excluded.



FIG. 2.—Skiagraph of enchondroma of the femur.

Before giving the patient a definite opinion about the nature of the tumor and the prognosis I decided to have a skiagraph taken and to subject a part of the growth to a microscopical examination. (The Röntgen photograph is shown in Fig. 2.) The microscopical examination, as shown in Fig. 3, revealed a typical enchondroma. Therefore it was demonstrated that the tumor was a benign one and that the patient's leg could be saved. Two days later I removed the entire tumor piece by piece. This was necessary because the ischiatic nerve was broadly attached to the tumor and in certain places seemed to be surrounded by its masses. The recovery was perfect. The patient is in good health to-day (six months since the operation), performing his work on a farm. No recurrence has appeared up to this time.

The great number of tumors of the shaft of the femur belong, as is well known, to the class of sarcomata. These may originate either from the bone marrow (myelogenous sarcomas), and have then a place of predilection of location in the region of the lower epiphysis of the femur, or they may originate from the periosteum (periosteal sarcomas). These are usually found in the metaphysis of the femur. That both varieties may be round cell, spindle cell, or polymorphous cell sarcomas, and their consistence, furthermore, may differ according to their variety and the formation of new bone within the wall of the sarcoma, is so universally

known that it is not necessary to go into details. It is, furthermore, unnecessary to point out that carcinomas of the femur are always of a metastatic nature, the primary seat often being found in the mamma.

Immediately beneath the major trochanter a benign tumor of the femur sometimes originates, to which only in the last years attention has been called by publications from von Bergmann's clinic

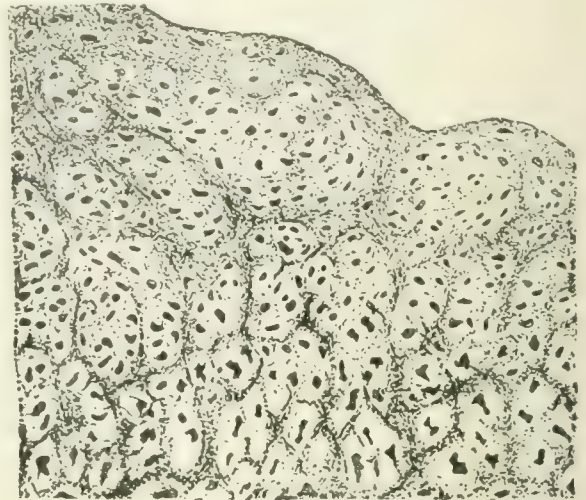


FIG. 3. Microscopical view of the enchondroma.

(by Schlange and König), the so called cystic chondrofibromas. They grow slowly, the bone immediately below the trochanter gradually increases in size and begins to bend, thereby producing a shortening of the femur, and they are usually found in young people. If left alone a spontaneous fracture of the bone may occur.

Although the growth is sometimes of large proportions (as in a case observed by von Bergmann and cited in the *Handbuch der praktischen Chirurgie* edited by von Bergmann, Bruns, and Miculicz, where the tumor extended from the head of the femur down to the middle of the thigh), their clinical diagnosis is in most cases easy, when we take into consideration the slow growth, the location immediately beneath the major trochanter, the bending of the femur and the shortening of the leg, and the age of the patient.

Among other benign tumors originating from the femur are cited fibromas, myxomas, cartilaginous exostoses (usually found in the region of the lower epiphysis), inflammatory osteoid tumors usually following a trauma and originating in the region of the linea aspera (König), echinococcus, congenital periosteal lipomas (originating in the region of the epiphysis of the minor trochanter) and enchondromas. Enchondromas, however, show very often a mixed composition. Chondromatous tissue may be mixed with fibrous tissue; fibrochondroma with myxomatous tissue; chondromyxoma, sometimes consisting of sarcomatous elements, with osteochondrosarcoma. Even if sarcomatous tissue is not found, they sometimes show a tendency to recurrence and metastasis, the latter chiefly taking place in the lungs of the individual. Vergely (*Lyon médical*, vol. liii, 1886, p. 167) speaks of a patient suffering from enchondroma of the upper end of the femur who died about one year following

amputation of the thigh from a generalization of the tumor within the lungs and heart.

In regard to differential diagnosis in the several forms of tumor formation of the femur, the Röntgen skiagraph is nowadays a most valuable aid.

While in sarcoma the shadow is more uniform, we find in enchondroma thin ledges of bone between the different nodules. However, the eye must be somewhat trained especially for this differential diagnosis, and to determine, for instance, definitely by the Röntgen ray in certain cases whether we have to deal with a sarcoma or a chronic osteomyelitis (periostitis aluminosa, Schlange) is impossible, in my opinion. There the exploratory incision and microscopical examination of the tissues in question have to speak the last and convincing word.

603 MILWAUKEE STREET.

A QUARTER REMOVED AFTER 219 DAYS IN THE OESOPHAGUS OF A CHILD.

By J. J. RECTENWALD, M. D.,

PITTSBURGH, PA.,

EX-RESIDENT, PHILADELPHIA HOSPITAL

September 25, 1904, Joseph S—, aged 2 years, 2 months, white, was found by his mother on enter-

ing the house, lying on the floor, his face cyanotic, and breathing difficult. Being anxious to know the cause of the trouble, the mother looked on the mantel where she had placed a quarter, and found it missing. She at once suspected the child had swallowed it. The family physician was called, and not finding any dangerous symptoms, decided the child had not swallowed the coin. Two hours later, when the father came home, the boy repeatedly grasped at his trachea and said, "Papa, my throat, my throat."

April 19, 1905, the boy was brought to me with the history that he swallowed a quarter September 25, 1904, and that he was never well since it happened, had lost considerable in weight, breathing was somewhat difficult, voice husky, frequently coughed, and swallowing was always difficult. Liquids readily passed down but solids would regurgitate. While sitting in my office eating a pretzel, and after swallowing a mouthful it would return again without entering the stomach. He would point to the spot in his chest and say, "Papa, here's the dollar." From these symptoms and knowing the bifurcation of the trachea is one of the narrow portions of the oesophagus, I decided the quarter must be resting there.

The first attempt at removal was made April 25, 1905, under chloroform anæsthesia. I introduced the ordinary coin catcher twice (Fig. 2). The

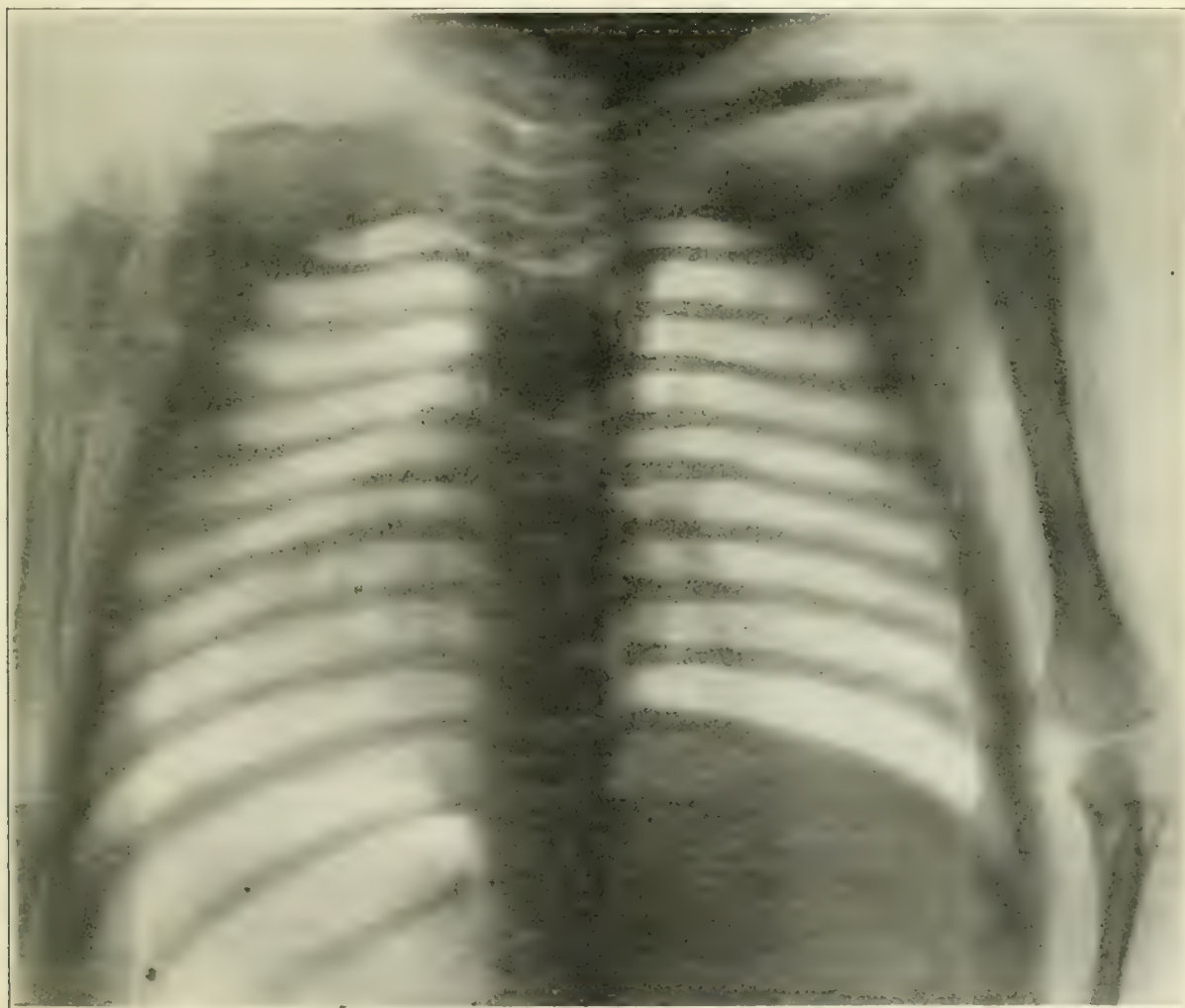


FIG. 1.—Radiograph showing position of the coin in the oesophagus

second time the basket of the instrument got fastened in the œsophagus so tightly I could scarcely withdraw it. I then introduced Tiemann's throat forceps, but failed. This I followed by the improved coin catcher (Fig. 3), made by myself for this operation. It brought up the quarter, and on its appearance in the pharynx the mouth gag slipped, and before I could grasp the coin it was swallowed. I then probed with an œsophageal bougie, which I passed into the stomach, and not feeling the quarter I decided it was in the stomach.

Three days later the boy was brought to me, having the same symptoms as before the operation. I

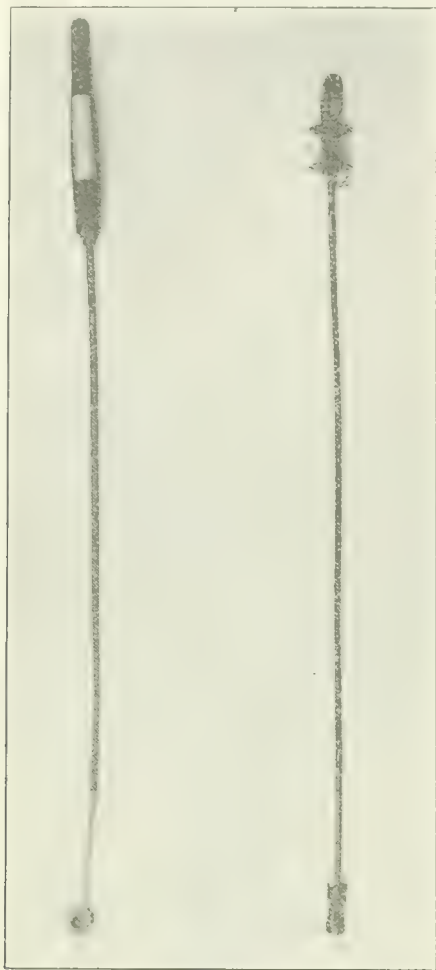


FIG. 2—Ordinary, and FIG. 3, improved coincatcher.

than had an x ray photograph taken by Dr. George Johnson, of Pittsburgh. It showed the quarter again located in the same place in the œsophagus.

May 2, 1905, I again had the boy chloroformed, introduced Tiemann's forceps three times. I grasped the quarter, but each time it slipped off. I tried the coin catcher, and it failed. Next I introduced my own coin catcher. Not passing the coin readily I moved the child's head to the left, and the acorn tip easily passed the coin. I then carefully withdrew the instrument, introducing the index finger of my left hand into the mouth to prevent the quarter again being swallowed, and when the coin appeared I threw it on the floor. It was black as charcoal, was covered with a thick mucilagenous substance, and

showed three shiny scratches where the Tiemann's forceps had slipped off.

After the operation the boy was given an occasional dose of olive oil. The next day he played about the yard, relieved of all symptoms. Not having received any solid food at home, he went the next day to his aunt's, and finding a table set, and no one near, he sat down and ate a full meal.

Although in the œsophagus 219 days there was no ulceration. The boy has been in perfect health ever since and is gaining in weight. He had no more difficulty in swallowing and the voice is no longer husky. The successful instrument (Fig. 3) is the remnant of an old discarded horse hair probang I had thrown in the waste basket seven years ago, but thinking that the whalebone might be of some service some future day I placed it again in my instrument case. The rubber having deteriorated, I removed it and the horse hair, leaving only the whalebone staff and the acorn tip. On both sides of the staff, at the base of the acorn tip, I filed a groove, the thickness of a quarter, in order to facilitate the withdrawal of the coin. The groove in the tip of the acorn, as seen in the cut, was filed, so that if the withdrawal should be unsuccessful the coin could be pushed into the stomach.

Tiemann's forceps failed, after five attempts, the basket coin catcher three times, while my instrument brought up the coin both times it was introduced. The basket coin catcher is at times a dangerous instrument. There are cases on record where gastrotomy had to be performed in order to remove it. Fig. 3 is a safe instrument to use, as it can be readily introduced and withdrawn without danger of fastening itself in the mucous membrane of the œsophagus.

As to other foreign bodies, I have in my possession an eight penny wire nail (2½ inches long) swallowed by a child of 16 months of age, passed after being in the body 9 days. The child had colicky pains, was restless, would frequently point to its mouth and stomach. The nail was discharged head first without injury to the child, and was found in the feces on the kitchen floor. Another case was that of a boy six years old who swallowed a quarter and passed it in four days.

132 SOUTHERN AVENUE.

THE PHYSIOLOGY OF RECREATION.*

By G. W. McCASKEY, M. D.,

FORT WAYNE, IND.,

PROFESSOR OF MEDICINE AND CLINICAL MEDICINE, INDIANA MEDICAL COLLEGE (PURDUE UNIVERSITY).

Recreation, or the act or state of being created anew, is one of the vitally important requirements of modern life, and is grounded in a practically universal instinct of the human race. Though its need becomes more pressing with the increasing strain of modern civilization, yet in one form or another it can be traced backward to the beginning of history. Homer, for instance, gives us in the Iliad a soul stirring account of the games given and presided over by Achilles after the funeral of his friend, Patroclus, while

* Read before the American Academy of Medicine at Chicago, Ill., November 10, 1905, as a part of a symposium on recreation.

Vergil relates how Æneas, driven by fierce winds from the coveted Italian shores back to the "Sicanian ports," celebrates the anniversary of his father's death by a brilliant series of what at Newport would be called events of the season, the first one being a boat race, a not unworthy progenitor of the modern yacht race. Later still the culture and civilization of historic Greece, the aroma of which comes floating down the ages with inexpressible sweetness, was permeated—nay, almost dominated—by the passionate thirst for recreation, and the Olympic games became the chronological landmarks of their history. Rome had its Colosseum, and if its walls reechoed, as they must, the gross and sensuous cruelty of that age, they also reechoed the commanding sentiment of that age, as of all other ages, concerning the need of recreation. A careful study of races and peoples down to our own gay Paris on the one hand, and the Fiji Islanders on the other, will reveal the same tendency so universal in one form or another throughout. Now it cannot be doubted that a habit so universal, a desire so absolutely cosmopolitan, must be the expression of an imperative demand, a fundamental requirement of the human race. The consequences entailed by its neglect vary widely with the temperament, the environment, and the occupation of the individual, but in the strenuous struggle which characterizes the intense life of to-day, they range anywhere from slight impairment of health and working capacity to final and crushing disaster. It was no distorted fancy, but only another of those clear, almost prophetic gleams of light which so frequently illuminated the soul of Shakespeare when he said:

Sweet recreation barred, what doth ensue
But moody and dull melancholy,
Kinsman to dull and comfortless despair,
And, at her heels, a huge infectious troop
Of pale distemperatures, and foes to life?

A general discussion of the physiological effects of recreation presents difficulties of a rather unusual character. To begin with, the modes and methods of recreation are so multiform and heterogeneous in character that it is difficult to bring them clearly and comprehensively within the range of mental vision for analysis and review. If an attempt were to be made to classify the various forms of recreation it could be worked out along various lines. They could, for instance, be divided into those of an indoor and outdoor character; again they could be considered as intellectual and physical, which would not be at all parallel to the first named division, although recreation of an intellectual character would be for the most part included among those of an indoor character. Others could be designated as social in nature, the complexity of the social attribute varying anywhere from the chance meeting of two or three individuals for recreative purposes up to the most elaborate ceremonial function evolved by modern society.

Without making any attempt at a systematic and complete discussion of the physiological changes produced by all the different forms of recreation, which would be difficult under any circumstances, and impossible in a fifteen minute

paper, I will proceed to call attention to what seems to me to be a few of the more important and salient points. It appears to me in the first place that the primary and predominant factor in practically all forms of recreation is the psychical one. Although the influences of the mind over the body are recognized in a general way, it is, I believe, fully comprehended by few if any. The sudden change from a state of extreme depression and misery with perfectly distinct physical suffering to one of buoyancy and exultation with entire forgetfulness of self as a result of a change of our emotions is a not unfamiliar experience in the lives of most people. But the lesson which it should teach, or the great fundamental law of our being to which it clearly points, is for the most part dimly perceived or more commonly not even suspected. It should be emphasized, therefore, that the functional state and activity of the principal organs of the body are dependent upon the controlling influences of mental conditions more than upon any one factor, even more, perhaps, than upon all other factors combined. This proposition is so fundamentally important and so liable to be challenged by incredulity that I will at once offer some facts for its support.

I will first draw some illustrations from the stomach, which will readily be conceded to occupy a most conspicuous position among the vital organs of the body. Here again the influences of psychical states upon the activity of the digestive processes are recognized to a certain but entirely inadequate extent. It has remained for a Russian scientist, Professor Paulow, of St. Petersburg, to demonstrate in an absolutely unequivocal manner the remarkable influence of psychical impressions upon the secretion of the gastric juice. The experiments to which I refer may be briefly described as follows: He first made a fistula in the stomach through which the stomach could be inspected and the gastric secretion procured. The next step was to lay bare the œsophagus, cut it in two and so arrange the upper segment that anything which the animal swallowed would be discharged externally instead of passing into the stomach. The dogs were then allowed to become quite hungry, and were subjected to sham feeding; that is, they were allowed to eat freely, the food of course never reaching the stomach. At the beginning of such an experiment there would not be a single drop of gastric juice in the stomach. Within five minutes from the beginning of the sham feeding gastric juice would begin to pour into the stomach and continue to do so in large quantities for a considerable period of time. On the other hand, if the meat was introduced into the stomach through the fistula, thus robbing the stomach of the influences of psychical impressions derived from the taste and smell of the meat, the flow of gastric juice did not begin until twenty-five minutes after the feeding instead of five, and was deficient both in quantity and quality. To make the proof of the psychical stimulation of gastric secretion entirely conclusive, however, and remove any possibility of reflex nervous influences reaching the stomach by reason of the act of mastication, deglutition,

taste, etc., the animal was simply tempted with the sight of food which he could not reach, and the psychical impressions thus produced started the flow of gastric secretion in six minutes in quantities larger than those produced by the direct introduction of the meat into the stomach through the fistula.

Nothing can be more conclusive than the experimental proof thus offered of the almost instantaneous and remarkable influences of psychical impressions upon the gastric secretion of the dog. It is true that these psychical impressions were of a specific character and were intimately connected by the law of physiological association with the processes of gastric function, but this does not in any way alter the fact that impressions of a purely psychical character, that mental states and processes are capable of throwing the stomach into a state of functional activity.

These experiments, moreover, are sustained by the common place facts of clinical observation. It is not necessary to dwell upon this aspect of the question. It is not a rare thing for the stomach to utterly fail in the digestion of a meal which it would otherwise have disposed of with ease and comfort, because of some depressing mental state; while on the other hand, the stimulating influence upon digestion of pleasant surroundings and convivial company is well known. As an illustration of the broad effects of mental impression in general, I may mention the case of a gentleman under my observation, whose digestion after considerable improvement remained more or less distressing in spite of all I could do for his relief which included the treatment of a local stomach disease by suitable methods, careful regulation of diet, gymnastics, and a liberal amount of outdoor exercise. This gentleman would go to a little lake forty miles away, and the very first meal that he would eat there, long before there could be any possible effect of exercise, atmospheric change, etc., would be digested without the slightest disturbance or even consciousness on his part, and this would continue until his return to the city when the old conditions would be immediately resumed.

I cannot go very much further along this line, but will briefly mention the heart and kidneys as other vital organs which are profoundly and obviously influenced by psychical impressions as every clinician and as many an intelligent layman knows. Now, what is true of these organs is perfectly true of every other organ of the human body, and it is only necessary to take one further inevitable step to realize the effect which mental states must have upon the composition of the blood and elimination of self formed poisons from the tissues and the functional integrity of the nervous system itself. In short, all that goes to make up the sum total of that perfect somatic life which we designate health and which is under the more or less complete domination of those functional manifestations of the highest nerve centres which we are pleased to term mental states.

The bearing of these facts upon problems connected with the physiological effects of recrea-

tion is obvious. If the various forms of recreation are closely scrutinized, it will, I think, be found that those diversions and amusements which produce the promptest and most brilliant effects upon both the mental and physical states of those who participate are precisely those in which the psychical impression is the strongest. The first requisite then in what might be termed successful recreation is a complete diversion from self, a complete submergence of self consciousness which inhibits that everlasting introspection of our physical selves which is the foundation of half the morbidity of the world. How this can best be done is a problem for the individual and depends upon his age, sex, social status, intellectual development, and other factors which go to make up the complete ego. For many persons some sort of diversion which has fast motion as an element meets the psychical requirements better than anything else. Automobiling belongs to this class of recreation, and I can personally testify to the remarkable influence which it has along the lines indicated. So far as my own taste and needs are concerned, I know of nothing that compares with it, but for some one else something entirely different might be better. Anyone who is curious to study the possibilities of fast motion in recreation should read an article by W. J. Lampton in the *Cosmopolitan Magazine* for June, 1902.

So far I have only considered the psychical element, which in certain forms of recreation is the only or principal factor, but in all is of the greatest importance. The next point to which I would ask your attention is the purely physical or mechanical aspect of many forms of recreation; in other words, the factor of muscular exercise. The effects of physical exercise upon the circulation and the general function of the body is too broad a subject to enter upon in detail, although reference may be made to a few points. Every muscular contraction, for instance, squeezes the blood and interstitial fluids out of the contracting muscle and sends them on their way through the proper channels. The expanding vessels and interstices of the relaxing muscle are instantly filled, and thus the circulation is quickened and the nutrition of the muscle improved. More than this, the increased activity of large groups of muscles, such as those forming a part of the abdominal and chest walls, bring to bear certain influences upon the contained viscera. In this way, the liver and spleen of the digestive tract are subjected to intermittent pressure which exerts an extremely important influence upon their functional activity. The same thing is true with reference to the lungs and heart in the chest cavity. Furthermore, the deep breathing incidental to physical exercise tends to better lung expansion and lung circulation and increases the resistive power of these organs against morbid influences, especially the tubercle bacillus. Better aeration of the blood is one of the necessary results of improvement of these functions which means better nutrition and better elimination and consequently an improvement in the state of the entire organism. It does not appear necessary to do more than barely call attention to these

facts as they are in accordance with well established physiological laws and must be perfectly obvious to every one who will give the matter the least consideration.

There is, however, one aspect of this question of physical exercise which is not at all familiar and which promises to be of the utmost importance in the final solution of many of the problems of both healthy and morbid physiology. I refer to the metabolism of the muscular tissue. Within the last few years great activity has prevailed in the investigations along these lines, and most important results have been obtained. It will be impossible to enter fully into the subject, but I may say briefly that we must look upon the skeletal muscles of the human body as something much more than a motor mechanism. In fact, many of the most important chemical changes which go to make up the sum total of what we glibly call metabolism probably have their seat here. For instance, it is more than suspected that diabetes is a result of faulty muscle metabolism as well as of pancreatic and other forms of disease, and it is more than probable that the chemical products of muscle metabolism play a tremendous rôle in the varied functions of life. I must refer you to the works of Geis, Halliburton, and others for the facts in this fascinating chapter of scientific research. It will serve my purpose at this time to point to the close relationship which must exist between the functional activity of a muscle and its metabolic changes as an indication if not a proof of the way in which physical exercise exerts so large an influence upon the life of the individual, and as furnishing important data for clearing up the physiology of recreation.

One other point that deserves mention in relation to outdoor recreation is the differential effect of indoor and outdoor air. The chemistry of the air of rooms surcharged with exhalation of human beings is very largely an unwritten chapter. Carbonic acid, its most conspicuous component, is perhaps from a toxicological point of view its least important one, and it is now realized that the deleterious influence of such air is due to volatile poisons altogether too elusive for chemical manipulation. No ordinarily practical amount of ventilation will entirely free the air from them. At best they can only be diluted. Out of doors, however, they are either destroyed or so infinitely diluted that they become quite unimportant, and self poisoning from noxious materials in the air under favorable conditions does not occur.

I fear that I have violated the traditions of the academy by dragging into this discussion the brute facts of science, which Oliver Wendell Holmes once called the "lumber of the human intellect," but the nature and importance of the subject appear to justify this descent from the higher social, educational, and ethical plane on which the academy is supposed to stand down to the everyday world of scientific thought. The vital relationship of recreation to the entire fabric of modern society should be more thoroughly understood and more consistently adhered to by a large contingent of the human family. I do not, of course, refer to that not very respectable

class whose sole aim of life is the realization of pleasurable sensations. They are out of the reckoning here as they are in every sensible and serious consideration of the problems of life. Recreation is not the great business of life, but simply relaxation from it. There are, perhaps, few of us who would contemplate with unmixed satisfaction the realization of Tennyson's fancy when he says:

I built myself a lordly pleasure house,
Wherein at ease for aye to dwell,

but the systematic introduction into our lives of such recreation as is suited to our individual needs should be the rational aim of all, and a proper understanding of the physiological laws and facts which underlie the whole subject could not be otherwise than helpful.

It has only been possible for me to touch upon a few points, and I will conclude with the admonition of Vergil that "Rural recreations abroad and books at home are the innocent pleasures of a man who is early wise."

407 WEST MAIN STREET.

GONORRHŒAL RHEUMATISM.*

By MARTIN W. WARE, M. D.,

NEW YORK,

ADJUNCT SURGEON, GENITOURINARY DEPARTMENT,
MOUNT SINAI HOSPITAL, ETC.

Gonorrhœal rheumatism, for the want of a better name, was the designation given to the joint and tendon affections which complicated urethritis of gonorrhœal origin or occurred as a sequel to it. This appellation is as vague as that of articular rheumatism; it dates back to that period when the specific organism, the gonococcus of Neisser, was unknown as the sole causative factor of gonorrhœa. When, furthermore, the gonococcus was found in effusions of joints, by Kammerer, Hartley, Koplik, and Goldenberg *intra vitam* and by Finger, Cohn, and Shlagenhauser in the joints at autopsy, it became an established fact that this form of arthritis was also a metastatic microbic joint affection—to wit: The gonococcus has been found in joint affections of infants afflicted with gonorrhœal ophthalmia or vulvovaginitis.

The presence of the gonococcus gives these joint affections a specific character and helps to distinguish them from such metastatic purulent synovitis and arthritides as are encountered in the course of a gonorrhœa, but due to other microorganisms, just as the larger number of prostatic abscesses, according to Desnos and Segond, contain other organisms than the gonococcus.

There is no time in the course of a gonorrhœal urethritis or any of its complications, prostatitis, epididymitis, salpingitis, etc., whether acute or chronic, that gonorrhœal synovitis cannot make its appearance. The characteristic tendency of gonorrhœa to chronicity, with permanent changes in the urethral mucous membrane and its likelihood to relapse, alike characterizes gonorrhœal synovitis, and even what may be styled a gonorrhœal synovitis tarda is a corollary to latent gonorrhœa. A type of the last variety I have observed:

* Read before the Metropolitan Medical Society, New York, November 28, 1905.

A gentleman, married five years and the father of one child, contracted within the year prior to his marriage a severe gonorrhœa complicated by periurethral abscess and prostatitis. Following a course of treatment lasting six months and after a rigid search for the gonococcus by the microscope and cultural methods, with negative findings, he entered the bonds of matrimony. This year he became afflicted with a rebellious, painful arthritis of the big toe which has lasted several months. He has not a single subjective symptom of the urinary tract, but on examining the prostate by rectum, the one lobe was found to be exquisitely tender, and upon massage of it, a thick, flaky, opalescent fluid escaped from the urethra which the microscope revealed as containing pus cells and epithelial cells in abundance, but no organisms, nor could organisms be grown bacteriologically.

Again, the stricture formation which is a feature of the chronic and inveterate form of gonorrhœa also finds expression in the great likelihood of all forms of gonorrhœal synovitis to become ankylosed.

Following postpuerperal infections chronic joint affections are encountered which run as protracted a course as do the pelvic exudates of great dimensions. The latter result in adhesions about the uterus and its annexa; the former in stiffness of the joint. König and Duplay with other writers of the French school have insisted that such articular affections are gonorrhœal, and Nasse with the aid of modern cultural methods succeeded in finding gonococci in a small paraarticular abscess of a puerpera.

The reports as to the type and severity of synovitis encountered vary as to whether these cases are seen in hospital or dispensary practice. It may be accepted as a truism that monoarticular affections in an overwhelming number of instances are gonorrhœal, and, whereas like articular rheumatism, gonorrhœa may affect many joints, it can be distinguished from the former by its tendency to affect these joints in succession and they do not subside as quickly. Furthermore, in rheumatism cardiac murmur is frequently heard, but rarely so in gonorrhœa. Salicylates, so effective in rheumatism, signally fail in gonorrhœal synovitis though they may cause some defervescence. Another peculiarity of gonorrhœal joint affections is the selection of smaller articulations such as the jaw, sternoclavicular joint, the thumb, and great toe. The knee is affected with greater frequency in men, and women are more often afflicted in articulations of the wrist.

The onset of the disease is marked by severe pains in the joints accompanied by fever and followed by rigidity. At times this is as far as the disease progresses, subsiding for a time only to relapse, perhaps with greater severity. If swelling supervenes it may be due to an effusion, detected by fluctuation, but in the vast number of instances the swelling is due to an exudation into and infiltration of the synovial membrane, ligaments and capsule of the joint. This condition is responsible for the periarticular phlegmonous type and which despite the name, but rarely goes on to suppuration. Fluid, if it is in the joint, is either serum or pus; the latter is more frequently due to other organisms. Under proper treatment, the severity of the symptoms having subsided, the thickened but no longer inflamed joint, has, in the subacute stage, all the

characteristics of a tuberculous joint even to the atrophy of the muscles. The preceding stormy onset, and the tendency to exacerbation, however, help to distinguish it. The pains so early to be experienced are lasting and at times so intense that any jarring of the bed is intolerable. I well recall the case of a man I treated two years ago whose intense pains of the gonorrhœal knee joint, though well immobilized by plaster of paris, could not be alleviated by the additional use of the proper amount of morphine, and whose relief only came to him and that promptly by Bier's method which eventually effected a cure. If due care be not exercised to immobilize and extend the joints forthwith and obtain a good position, ankylosis in faulty positions results and, in the knee and wrist, subluxation may take place.

Peculiar to all the forms of arthritis is the rapid onset of muscular atrophy. Apart from the radiating pains that invade the muscles in consequence of the extension of the inflammation from tendons into them, a number of cases with discreet infiltrations and abscess have been encountered in which the gonococcus was found.

Such a case I can report of a man who consulted me for severe pain about the shoulder joint, which was swollen and limited in its range of motion. The posterior axillary fold was tender and infiltrated. Eventually a swelling was detected which became so painful as to call for an incision. No pus was encountered, but a turbid serum containing Gram's negative diplococci. The muscle showed all the changes of interstitial myositis, marked proliferation of the interstitial connective tissue and hyaline degeneration of the muscle fibre. Gonococci were also found in the secretion expressed from the muscle fibres and in sections of the diseased muscle.

In the syndrome of gonorrhœal rheumatism it is customary to class the diseased bursa and tendons. That covering the os calcis and the præpatellæ bursa are most commonly affected. In connection with the bursa over the os calcis we have learned to know of a condition styled by Albert as "achillodynia." This is a tenonothecitis of the tendo Achillis. Tenderness, pain and crepitation extend along the length of the tendon to its insertion. In the severer grades the os calcis is left permanently thickened and for a long time to come patients complain of a very painful heel. At times these thickenings manifest themselves as osteophytes. This painful heel is known as *pied blenorragique*. In some few instances the x ray has shown veritable exostoses to exist which surgical measures alone can relieve. We often see cases in which there is a tenderness of the bony prominences at the site of the tendon insertion, and with repeated attacks and recurrences the bones become thickened and nodosities result. Garrod, Charcot, and Amoral have entitled these *rhumatisme blenorragique à forme nodeuse*.

Ullman records a case of osteomyelitis in which he encountered the gonococcus and König records a case of gonorrhœal synovitis of the wrist which started in abscess of the bone and which he extirpated.

Pathological Anatomy: All that is known to us of the pathological anatomy of gonorrhœal joint affections is that the synovial membranes are swollen, intensely congested and covered with

smeary pus. Councilman's findings in a knee joint of a child four years of age, showed the principal change to be a cloudy swelling of the synovial membrane and a profuse proliferation of granulation tissue of the synovia. Jacobi and Goldman in a case of tenosynovitis corroborate this view. Finger, Cohn, and Shlagenhauser have added to the picture by describing a granular condition that the outer cells of synovial membranes assume, on top of which is a network of fibrin and over this a layer of granulation tissue. Ankylosis is due to the shrinkage of the profusely proliferated granulation tissue.

Diagnosis: In every obscure joint affection we must look to the urine, and it is surprising to what extent this simple expedient will spare any further interrogation or investigation. In adult males we can be more searching than in the females. Many a gonorrhœal arthritis, chronic and relapsing, is designated as rheumatism or gout, when the introduction of the finger in the rectum will detect an enlarged and tender prostate followed by the escape of purulent discharge from the urethra, or a urine laden with shreds and threads which heretofore have been absent from it, and which not infrequently after this manipulation continue to make their appearance. In women, married or otherwise, we may elicit a history of scalding urination or a specimen which is cloudy. If the woman consents to examination, the presence of urethral caruncles and small petechial hæmorrhages in the vaginal mucous membrane (referred to by Bumm as macula gonorrhœica) even though the discharge be slight, constitute valuable corroborative evidence as to the gonorrhœal nature of the arthritis. The existence of a gonorrhœal iritis may have to be taken into consideration to clinch the diagnosis of a doubtful arthropathy.

Finally the question arises, Are we justified in aspirating a joint to establish a diagnosis? Be it answered that only if the aspiration is indicated for the relief of symptoms and then it may be resorted to incidentally, for the chances of other infection are too great and the possibility of obtaining a growth even on the best of media is fraught with much uncertainty in the outcome of the results.

Thayer, Blumer, and Hewes report the finding of gonococci in blood.

1198 LEXINGTON AVENUE.

Oliver Wendell Holmes and Puerperal Fever.—Charles T. Cullingworth, in an address, recalls to our minds the great importance of our well known author, poet, and medical teacher, Oliver Wendell Holmes, in reference to puerperal fever. There appeared in the April, 1843, issue of the *New England Quarterly Journal of Medicine and Surgery* an essay by Holmes: "The contagiousness of puerperal fever." It had been read previously at a meeting of the Boston Society for Medical Improvement, and was published upon the request of this association. As the journal had only a very restricted circulation and died a natural death when it was but a year old, the essay was practically buried, and until its reissue with additions in 1855 under the title: "Puerperal Fever as a Private Pestilence," cannot be said to have been brought fully before the profession. In 1847 were published Semmelweis's observations on puerperal fever by Hebra and in 1861 appeared his book: "Die Ätiologie, der Begriff und die Prophylaxis des Kindbettfiebers."

Therapeutical Notes.

Tonsillitis.—Niles (in *Medical Record*) advises the use of the following gargle, which he has prescribed for years with the happiest results:

℞ Pot. bicarb.,.....3iv;
Spt. menth pip., }
Spt. camphoræ.....āā 3ss.
Aq. ferv.....q. s. ad 3iv.

Sig.: Use hot, gargle every hour or two.

The Ice Bag in the Precordial Region for Reducing Temperature.—M. Leduc advocates (*L'Union médicale de Canada*, from *Revue de thérapeutique*, November, 1905) the prolonged application of the ice bag to the precordium in the treatment of fever. He considers it an efficient substitute for the cold bath in some cases. The ice bag is separated from the skin by one or more layers of flannel, and is kept in place by a roller bandage. Caution is advised against removal of the cold application, which should remain in place until the temperature has remained for several days at the normal. One peculiar effect observed was that the action of antipyretic agents was notably increased by the ice bag.

Cholagogue Pills:

℞ Pulv. aloes.....0.06 gramme;
Euonymin.....0.03 gramme;
Cambogia.....0.02 gramme;
Ext. hyoscyami.....0.01 gramme;
Saponis.....q. s.

Ft. pil No. 1.

Take at nine o'clock in the evening. The following formula may be used in place of the above:

℞ Euronimin.....0.05 gramme;
Ext. belladonnæ fol. alc., }āā 0.01 gramme;
P. dophyllin,
Saponis.....q. s.

Ft. pil No. 1.

If the action is too energetic, the pill can be cut in half.—H. Huchard and Ch. Fiessinger, *Journal des praticiens*.

Artificial Respiration in Cases of Sudden Death from Electricity.—Dr. J. Kratler, of Graz (*Wiener medizinische Blätter*, November 23, 1905), at the seventy-seventh meeting of the Association of German Naturalists and Physicians, read a communication on death by electricity. He considers it established that in these cases death is due to central respiratory paralysis, and therefore properly attributable to suffocation. The recognition of fatalities from electricity as cases of suffocation has led to the discovery that, as in other cases of suffocation, the institution of artificial respiration will save life. The individual resistance to the electric current varies, as experience has shown; some will perish from comparatively weak currents (100 milliamperes), while others survive several thousand volts. It has been observed that the resistance is less in persons suffering with heart disease and in alcoholics.

The Radical Treatment of Pruritus Ani.—In a poorly nourished, irritable girl, 12 years of age who had suffered for four years with severe anal pruritus, and had been treated ineffectually by ordinary methods, Dr. Klein, of Berlin, found hypertrophy of the mucous membrane and skin around the anus; the lesions having the color and appearance of moist syphilitic papules. This

condition also extended to a distance of from 2 to 3 centimetres up into the rectum. Under an anæsthetic, Klein energetically applied a Pacquelin-Brenner cautery to the entire affected surface. Subsequently the wound was treated with lotions of camomile (sitz baths) and applications of lanoline cream. In four weeks complete cure resulted; there was no scarring worth noticing. The operator believes that this method might also be successful in some chronic forms of pruritus of the vagina.—*Die Therapie der Gegenwart*, November, 1905.

Serum Treatment of Pneumonia.—Pneumonia is justly regarded as one of the most feared infectious diseases, especially since very little can be done with drugs. Many attempts have been made to manufacture a serum, but the only one which comes into consideration at present is that of Römer, originally recommended for a local pneumococcus disease, the *ulcus serpens corneæ*. This serum is a polyvalent serum, possessing very pronounced bactericidal action. D. Lindenstein (*Münch. med. Woch.*, September 26, 1905) has had occasion to try it in four typical cases of fibrinous pneumonia. Since the injections were made as soon as the patients arrived at the hospital instead of waiting until serious symptoms developed, the results were more satisfactory than those reported by other authors. Though the temperature was not affected and the appearance of the crisis not hastened, marked subjective improvement was always manifest and stimulation of the circulatory organs was very evident. Eruptions or infiltrations at the site of injection were never seen. Further trials, however, will be necessary before the value of the serum is definitely decided.

Subcutaneous Injections of Isotonic Sea Water for the Œdema of Bright's Disease.—Dr. Robert Simon (*Bulletin général de thérapeutique*, November, 1905) reports a case which he considers unique in therapeutics. Acting upon the hint derived from studying the results of Quinton's experiments upon dogs, Dr. Simon used isotonic sea water solution clinically for the relief of extensive œdema occurring in a woman suffering with Bright's disease. He gave injections in the buttocks of 200 c.c., and this dose was repeated in the same dose every three days. After the first injection notable improvement was observed in all the symptoms, and in five days the body weight was reduced 3.050 kilogrammes, or at the rate of 610 grammes a day. The proportion of chlorides and of albumin in the urine was not much affected, but the actual quantity was greatly increased, since the total excretion of urine was enhanced about fifty per cent. Eight injections of sea water were given in all; after 23 days of this treatment the œdema entirely disappeared and the patient was able to be out of bed. Milk diet was continued for three weeks more, when she was convalescent.

Surgical Operation for Relief of Epilepsy.—Friedrich reports (*Langenbeck's Archiv.*, vol. lxxvii, part 3) eleven cases of severe epilepsy of obstinate and long standing character that were treated by trephining and excision of a portion of the *dura mater*. In one patient who had had

epileptic convulsions for thirteen years, with mental impairment and psychic disturbances, no further attacks occurred subsequent to the operation, and his mental condition improved beyond expectation. Two other cases were improved so much that they were able to return to their occupation. Benefit was observed in the other cases also. Friedrich does not assume that every epileptic must be operated upon, but he declares it to be his experience that a careful examination of the clinical history of all epileptics will show that there are a certain number of cases of genuine epilepsy which distinctly belong to surgery. Some cases are known to have had a traumatic origin; in others it may exist, but be unsuspected. If the point of cortical irritation can be discovered, the application of the trephine and the removal of a button of bone with the underlying *dura mater*, may relieve the brain and remove the cause of the convulsions.—*Die Therapie der Gegenwart*, November, 1905.

Treatment of Psoriasis.—Dr. J. V. Shoemaker (*Medical Bulletin*) prescribes for psoriasis with gastrointestinal catarrh:

R. Liq. acid arseniosi, 0.5 drachms;
Strychnine Sulphatis, $\frac{7}{8}$ grain;
Acid hydrochlor. dilut., 3 drachms
Pepsini glycerinat. q. s. ad. 4 ounces.
M. Sig. Give two teaspoonfuls after each meal.

To soften the scales and remove them:

R. Acid salicylici, } āā 3i;
Olei cadini, }
Balsami Peruviani, 3j;
Ung. Aquæ rosæ, 3i.
M. Sig. Apply locally twice daily.

Psoriasis is generally due to some internal derangement, such as gout, rheumatism, anæmia, nervousness, or gastrointestinal catarrh. By some it is claimed that this disease is also hereditary and contagious, but as yet this view has not been supported by sufficient cases to establish it. Psoriasis is curable, provided rational treatment is instituted and rigidly observed. The cause, whether gout, rheumatism, gastrointestinal catarrh, must first receive attention. When the internal disease is cured the eruption will vanish. Relapses may occur when these cases again become active, and recovery will follow the same treatment. It may also follow eczema, scrofula, syphilis, or traumatism. The rule is before beginning treatment for the psoriasis to first seek the cause and remove that. The local treatment is secondary.

Treatment of Acute Indigestion, or Embarras Gastrique.—To empty the stomach, an emetic is prescribed as follows:

R. Syrup ipecæ, 30 grammes;
Pulv. ipecæ, 0.30 grammes.
M. Give a dessertspoonful every quarter of an hour until vomiting is produced. Warm water is to be drunk in the interval between the doses.

After the stomach has been emptied, a purgative dose is given (such as castor oil, citrate of magnesium solution, manna, or rhubarb). All food is withheld for a day or two, but acidulated drinks, especially weak lemonade, may be used. To relieve the abdominal pains, hot compresses (simple or containing laudanum) may be applied, or a hot bath may be tried. If there is fever, quinine sulphate may be administered in doses of

0.20 to 0.50 gramme. Nourishment may gradually be resumed. If there is anorexia, the simple or aromatic bitters will prove of value. Pepsin may be given after meals. Alkaline mineral waters may be taken for several days.—*Bulletin général de thérapeutiques*, December 8, 1905.

Topical Application of Salicylic Acid in Acute Rheumatic Arthritis.—Dr. J. M. Anders finds the following formula beneficial in acute articular rheumatism:

R. Acid. Salicylici. { āā 3iii;
Lanolin. {
Ol. terebinthinæ, 3jjj;
Adipis, 3jjj;
M. et. ft. ung. Sig.: Rub over the affected joints and envelop in cotton.

On Convulsions in Early Infancy.—In speaking of the ætiology of convulsions occurring in early infancy, John Thompson (*Practitioner*, October, 1905) divides it into the predisposing and exciting causes as follows: Of predisposing causes four may be mentioned: (1) There is, of course, the age of the patient—the state of development of the infant's nervous system, predisposing him to all kinds of convulsive attacks. (2) Certain general diseases may predispose—especially rickets. This is by far the most important of the predisposing causes, as it is the only one which is amenable to immediate treatment. The tendency to convulsions, in rickety children, rapidly disappears under antirachitic treatment, even although obvious sources of peripheral irritation persist. (3) A very important predisposing element is inherited nervousness of constitution. Some children are hereditarily so nervous that any rise of temperature or any peripheral irritation, however slight, may bring on a fit. This state of nervousness may be found in children who seem otherwise strong; and sometimes many members of a family have it to a marked extent. (4) Another predisposing cause is a permanently damaged state of the brain from any cause—quite apart from any recent changes in it. An area of cortical sclerosis, for example, even when it does not affect the mental functions, is very often accompanied by a tendency to convulsions. In the same way, nearly all the developmental and other lesions, which produce imbecility, predispose also to convulsions on slight provocation. The recurrence of convulsions in very young children should, therefore, always lead to a careful investigation of the child's mental state. Possible exciting causes are very numerous indeed. The most important of them may be classed in one or other of three groups: (1) They may result from a number of intracranial causes (diseases, injuries or circulatory changes). Such, for example, are, concussion, hæmorrhage, tumor, abscess, and meningitis of all kinds; also cerebral congestion, which we sometimes get in whooping cough, and in some cases of congenital heart disease, and the cerebral anæmia, which accompanies severe diarrhœa and loss of blood. (2) General acute morbid conditions, again, are often responsible for a convulsive attack. A sudden rise of temperature, such as would produce a rigor in an adult, will often in an infant cause a convulsion. This is seen in pneumonia and in various of the exanthemata, especially in scarlet fever. In

uræmia, fits are not uncommon, and a large number of poisons, both metallic and vegetable, often occasion them. (3) Peripheral nervous irritation is certainly a common exciting cause of fits, and one which is often present even when its site of origin is obscure. Undigested matters in the bowel or stomach, painful lesions connected with dentition, otitis, or phimosis, may readily start a convulsion in rickety or neurotic infants. Generally, as mentioned above, the place of rigors is taken in young children by convulsions. It is, however, a very curious thing that acute irritation of the renal pelves frequently give rise to rigors, even in young babies. Among twelve cases of acute pyelitis from *Bacillus coli* in infants, that I have seen, no fewer than six suffered from rigors. Two of the cases were in children of five and seven months, respectively. In none of them have there been any ordinary convulsions.

Simple Treatment of Poisoning with Malefern.—Malefern (aspidium), which is so often used in the treatment of tapeworm, sometimes produces very serious poisoning even after moderate doses. Thus twelve grammes of the extract produced a condition of collapse in a very strong patient, and injections of camphor and other remedies were tried without success. A very simple remedy was then administered, namely, the juice of a lemon, which immediately relieved the patient's symptoms and very quickly produced vomiting, after which the patient rapidly recovered. In giving the extract of malefern for the removal of tapeworms, Apolant (*Deutsche medizinische Wochenschrift*, 1905, No. 44) recommends the use of a powder, consisting of five grains each of menthol and sugar of milk. This is given in wafers half an hour before the tapeworm remedy is taken. Other remedies which are recommended for the prevention of poisoning after taking malefern are black coffee and peppermint.

The Evils of Exclusive Milk Diets in Certain Forms of Infantile Diarrhœa.—Carretier, quoted in *Repertoire de thérapeutique*, November, 1905, page 238, recently submitted a thesis to the Faculty of Bordeaux, in which he maintained the following propositions: Milk, which is the food of choice for infants who are in perfect health during the first eight months of life, may be a cause of fatal digestive troubles, when given to infants suffering from diarrhœal diseases. Beginning with the eighth month, milk can be well borne as late as the sixteenth month, but weaning is often begun at the eighth month by adding other articles of food. An exclusive milk feeding administered in the course of the second year, or a too great quantity of milk given together with semisolid food, may produce a rebellious dyspepsia, which will not cease, save after a change of the diet to a farinaceous or leguminous food. This dyspepsia at times does not disappear until the milk is entirely banished from the dietary and is replaced by water in the preparation of the foods given to the infant. Some dyspepsias at the end of the first period of infancy, and at the beginning of the second period (that is, after the eighth month), are aggravated by a milk diet. In such cases of course the change of food recommended above should be also adopted.

NEW YORK MEDICAL JOURNAL.

INCORPORATING THE
Philadelphia Medical Journal
and The Medical News.

A Weekly Review of Medicine.

Edited by

FRANK P. FOSTER, M. D.,
and SMITH ELY JELLIFFE, M. D.

ADVISORY EDITORIAL STAFF:

NICHOLAS SENN, M. D.,	-	-	Chicago.
FREDERICK C. SHATTUCK, M. D.,	-	-	Boston.
JAMES M. ANDERS, M. D.,	-	-	Philadelphia.
JEFFERSON R. KEAN, M. D.,	-	-	United States Army.
RUODOLPH MATAS, M. D.,	-	-	New Orleans.

ASSISTANT EDITORS:

REED B. GRANGER, M. D.
FREDERICK T. HANEMAN, M. D.
JOHN M. SWAN, M. D., Philadelphia.

Address all business communications to

A. R. ELLIOTT PUBLISHING COMPANY,
Publishers.

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, JANUARY 13, 1906.

THE PROPOSED YERKES HOSPITAL.

The late Mr. Yerkes provided in his will an ample fund for the establishment of a large general hospital in the borough of the Bronx. The will, it is understood, made the fund available only on the decease of Mrs. Yerkes, but it is also understood that that lady is most generously disposed to waive her life interest in that portion of the estate required to produce the fund. If there are no insurmountable legal obstacles to the accomplishment of her wish, therefore, we may expect the hospital to be established within a comparatively short time.

The Bronx is in need of a large and well equipped hospital, and the rapid growth of the borough in population will accentuate that need year by year and almost month by month. The time has come when, with our increased traveling facilities in New York, a hospital north of the Harlem River may readily draw its attending medical staff largely from the borough of Manhattan, though in a few years the Bronx itself will undoubtedly be quite independent of the older part of the city as regards physicians and surgeons of ample experience. It is said that Mr. Yerkes consulted Dr. Joseph E. Janvrin as to the situation of the hospital that he intended

to provide for, and certainly Dr. Janvrin's long familiarity with the conduct of the hospitals of New York and with the hospital needs of the city in its various parts must be conceded to have fitted him peculiarly to give the best advice in the matter.

We presume that Dr. Janvrin has been or will be consulted also as to the precise spot on which the new hospital should be built, as to the arrangement and construction of the buildings, and as to the organization of the governing board and the medical staff. These are matters in regard to which a competent physician's counsel should always be sought when a new hospital is to be established; indeed, there is great danger of running into error when those who are charged with the financial management omit to take this precaution. Mr. Yerkes, we believe, was too good a business man to fail to make provision in one way or another for securing the predominance of medical opinion in medical work to be carried out with funds provided by him.

AN IMPROVED DIPHTHERIA ANTITOXINE.

The striking results obtained by the use of antitoxine in the treatment of diphtheria may be truly described as one of the master strokes of modern therapeutic genius. Recent researches in the field of immunity have placed before the minds of conscientious experimenters rational hypotheses in explanation of the startling results obtained, and biological chemistry at the same time has thus been attempting to unravel the mystery of the composition of the antitoxic substances found in the blood serum of the horse.

Notwithstanding the many intricacies encompassing the worker in the fields of biological chemistry, rendering a definite conclusion premature, it may be taken as fairly well established that the globulins contain the antitoxic substances in some form of combination. To separate these antitoxine globulins is but a short step in the advance toward an ideally perfect diphtheria antitoxine.

There have been numerous attempts in this direction, the most recent of which, and one giving more than ordinary promise, is the work of the New York Board of Health—as is well known, the pioneer in this class of research in this country.

Dr. R. B. Gibson, working in Dr. Park's laboratory (*Journal of Biological Chemistry*, January), has succeeded in making a concentrated form of diphtheria antitoxine which offers commercial and therapeutical advantages of no uncertain tenor. Taking advantage of the fact that

the antitoxine globulin may be precipitated, in part at least, by certain chemical salts, notably ammonium sulphate in concentrated solution, by appropriate after treatment, the details of which may be found in his original communication, he has succeeded in obtaining a concentrated serum, resembling original serum and capable of being crystallized out into a scale antitoxine.

This concentrated serum may be kept in the cold in the ordinary manner, and preserves its potency. The therapeutical effects obtained resemble those of ordinary serum, but it is thought that the tendency to form antitoxine rashes is diminished. It may be thoroughly sterilized. Furthermore, by this process it has been found practicable to utilize large quantities of low grade serum, and also to concentrate serums which may have been issued and returned to the laboratory as being too old. Thus an important commercial saving is introduced into the manufacture of this highly valuable substance, and we are led to hope that by further applications of similar procedures what has constituted a distinct barrier to the use of the diphtheria antitoxine, its expense, may be largely eliminated.

THE PHYSIOLOGY OF HEART BLOCK.

By the term heart block is meant a condition in which the auricles and the ventricles beat rhythmically and independently of each other, because the impulses which cause the auricles to contract do not reach the ventricles. It is found in cases, known clinically as Stokes-Adams disease, which are characterized by vertigo, sometimes associated with loss of consciousness, pain or soreness in the chest, dyspnoea, and a remarkable difference between the pulse rate and the rate of the heart, for example, pulse, 32; heart, 124. Venous engorgement and venous pulse are also seen. In cases of Stokes-Adams disease there is often a period of partial heart block in which the auricles and the ventricles do not beat independently, but in which there is a distinct ratio between the two, one ventricular contraction to four auricular contractions, one ventricular contraction to three auricular contractions, etc.

Joseph Erlanger (*Journal of Experimental Medicine*, November 25th) has made a thorough study of a case of Stokes-Adams disease. The patient was a negro, aged thirty-four years. Erlanger made elaborate and exhaustive investigations by means of tracings of the cardiac impulse, the venous pulsations, and the pulsations in the brachial artery. From these studies he concludes that the tracings show two perfectly regular rhythms. In one, which is undoubtedly ventricular, the waves recur approximately every

2.12 seconds; in the other, which he assumes to be auricular, the waves recur approximately every 0.6 second. It is clear that these two rhythms are perfectly independent of each other. The only condition which can reproduce this state of affairs is that which is usually termed complete heart block. In the patient under consideration an opportunity was afforded for studying the independent reactions of the auricles and the ventricles to stimuli carried to the heart by means of its extrinsic nerves or through the medium of the blood. The effects of postural changes, of moderate and severe muscular exercise, of inhalations of ammonia, of asphyxia, and of the administration of atropine were studied. During complete block the change from the recumbent to the erect posture did not affect the ventricular rate, but the auricular rate showed the normal acceleration. In the condition of partial block the change of position affected the ventricles to the same degree as the auricles. In complete block moderate muscular exercise had no influence on the rate of the ventricles, but the auricles showed the usual acceleration. In partial block the rate of the pulsation of the auricles and of the ventricles increased proportionately. Severe muscular exercise, on the other hand, increased the rate of the ventricles as well as that of the auricles in complete block; while in partial block severe exercise increased the rate of the auricles and slowed that of the ventricles. No conclusions could be drawn from the results of the inhalation of ammonia. Inhalations of oxygen produced no effect on the pulse rate. In complete block holding the breath produced no effect at first, but toward the end of the experiment the auricular rate increased and the ventricular rate diminished. In partial block the ventricular rate varied directly as the auricular rate. When heart block is complete, atropine has no effect upon the ventricular rate, but it has the usual accelerating effect upon the auricular rate. In partial block atropine has no direct influence on the ventricles. In other words, influences normally transmitted by the pneumogastric nerves do not affect the ventricles, but do affect the auricles as usual. Influences which normally reach the heart through the accelerator nerves still influence the rate of the ventricles as well as that of the auricles.

The increase in the auricular rate is the important factor in the production of the degree of partial heart block and in the production of the syncopal attacks in cases of Stokes-Adams disease. The marked slowing of the ventricular rate is the main feature of the syncopal attacks. At the time of the maximum slowing the interval between two ventricular beats may be more than

ten seconds, and during these intervals the auricles continue to beat with perfect regularity. The cause of slowing of the ventricular rate may be common with that of the acceleration of the auricular rate; it may be that the increase of the auricular rate causes the slowing of the ventricle; or it may be that the slowing of the ventricular rate causes the acceleration of the auricular rate. Erlanger believes the second of these propositions to be the true one. A study of the relation between the blood pressure and the slowing of the ventricles resulted in the conclusion that the slowing of the ventricular rate and the acceleration of the auricular rate, which are always synchronous, were not dependent upon blood pressure changes. The cause of the syncopal attacks, however, lies in the heart and not in the medullary centres. The mean blood pressure is higher when the heart beat is normal than when complete block exists.

CHRONIC APPENDICULAR INFLAMMATION.

The recognition and more careful study of the chronic forms of appendicular disease promise to constitute almost as great an advance in practice as the prompt surgical treatment of the acute attacks of the disease. One no longer hears of the cases of "inflammation of the bowels" and "idiopathic peritonitis" which were so frequent and so fatal a generation ago. These conditions are now very generally diagnosticated correctly, an operation is performed, and life is saved. There is, however, a vast amount of preventable suffering, general ill health, vague stomach and intestinal symptoms, progressive loss of flesh and strength, obscure nervous conditions, anæmia, and obstinate constipation which are occasioned by chronic appendicular inflammation. The pathological condition in these cases is often only a slow obliterating proliferation of connective tissue in the walls of the appendix; there is no pus formation at any time; after months or years an acute attack may clear up the diagnosis, or there may never be any acute symptoms and the unfortunate patient is doomed to a life of chronic invalidism. When pain is felt in these cases, it is often not in the region of the appendix, over the McBurney point; it may be more generalized about the umbilicus or be referred to the site of the gallbladder or be felt in the stomach. These reflected pains are not surprising when the abundant connections of the rich nerve supply of the appendix, through the superior mesenteric plexus of the sympathetic, with the pneumogastric and the hepatic and gastric plexuses are remembered. These cases are variously diagnosticated as ulcer of the stomach, cholelithiasis, mucous colitis, and

functional stomach and intestinal disorders, and are treated expectantly and symptomatically. The stomach is washed out and minute analyses of the gastric contents are made with no benefit to the patient, and medicines are found to be worse than useless. When the physician has exhausted his patience and resources, these patients are put down as hopeless neurasthenics (a much abused word, but often a convenient cloak for diagnostic errors) and are bundled off on a sea voyage, to a mineral spring, or to a sanatorium. They get well when their appendices are removed. As they come under the care of the family physician for the most part, he should be on the alert for appendicitis larvata, as Ewald has well denominated it. Obscure as it is, the true diagnosis will often be reached only by a process of exclusion. When ill defined abdominal symptoms continue uninfluenced by medical treatment, the appendix should always be thought of, and after conservative methods have been sufficiently tried, an exploratory operation is indicated and will often be attended with the most brilliant results.

THE SOLAR PLEXUS IN ITS RELATION TO ATONIC DYSPEPSIA.

For the last decade or more the treatment of dyspepsia has been mainly governed by chemical ideas, and conducted principally with the view of correcting defective secretions. While in some cases this has been successful, in many others it has failed to yield more than temporary relief.

In his recent monograph on diseases of the stomach (*Journal des praticiens*, November 1st), Soupalt criticises this method because it involves neglect of two important factors, i. e., the hyperæsthesia of the gastric mucosa and the motor troubles. The former, indeed, he regards as really the essential element, the motor and secretory abnormalities being, in his opinion, only contingent and accessory phenomena. He directs attention to the fact that the increased sensitiveness of the stomach is not manifested by making pressure upon the organ itself, but by pressure in the epigastrium—that is to say, upon the branches of the solar plexus which surround the celiac axis, and he maintains therefore that dyspepsia is in the last analysis a symptom of hyperæsthesia of the solar plexus. Owing to its intimate relation with the pelvic organs, the stomach, intestines, heart, and lungs, from which it constantly receives reflex impulses, not to speak of the brain and spinal cord, there is a possibility of dyspepsia in any subject in whom this great nervous centre is in a state of unstable equilibrium. This view, which had already been advanced by Raffray, appears to be in harmony with clinical experience. It also

explains the diversity which is often to be observed in the details of treatment. The main object in treating a case of dyspepsia should be, according to Soupalt, to relieve the hyperæsthesia of the solar plexus, and the therapeutics should be governed or guided by the special cause of the hyperæsthesia in the individual case.

For instance, one person's dyspepsia may be caused simply by excess in the quantity of food; and for its relief only a restricted diet may be necessary. Another may suffer from irregularity or errors of diet, which may be aggravated by intense mental application; here the diet must be regulated and in addition the excessive intellectual work interdicted. In some cases it is only necessary for the patient to forget all about his stomach by having his attention diverted in order to be suddenly relieved of his indigestion. It appears, therefore, as if psychotherapy might alone effect a cure. But such cases are exceptional, and in most instances local treatment is required in addition. Moral treatment, however, in cases of confirmed dyspepsia, should never be neglected.

The cause of the hyperæsthesia of the solar plexus varies in different subjects, and occasionally it will be observed that several causes may cooperate in the same patient. If the sufferer is dyspeptic because of a renal or cardiac affection, or simply a reflex cause (renal ptosis, uterine fibroma, etc.), it is necessary to remedy the original condition or conditions if several coexist, in order to relieve the hyperæsthesia of the ganglia. One of the most frequently used remedies in the symptomatic treatment of dyspepsia is undoubtedly sodium bicarbonate, and its beneficial action is mainly due to its power of diminishing hyperæsthesia both of the gastric mucosa and of the branches of the sympathetic below the diaphragm. It is therefore a useful and sometimes indispensable auxiliary to the bitter tonics and the hygienic and moral treatment of dyspepsia.

CLINICAL OBSERVATION OF THE SENSE OF SMELL.

Measurement of the acuteness of the sense of smell is somewhat elaborately advocated by a Paris hospital physician, Dr. Marcel Lermoyez, in the *Presse médicale* for December 9th. It is to be accomplished by means of Zwaardemaker's olfactometer, and the results may be recorded in "olfacties," the "olfacty" being the unit either of olfactory capacity or of the odorous property residing in the substance used as a test. Irritants, says Lermoyez, such as ammonia and acetic acid, should not be used as tests, because they stimulate the nerves of common sensation only and have no action on the olfactory nerve. We presume that many will

dissent from the statement that those substances have no odor.

Lermoyez foresees that physicians may object to embarrassing themselves with an additional instrument of precision, saying that they have hitherto got along well enough without it. But, says he, in old times there was no clinical thermometry, and Hippocrates ungrudgingly dispensed with the stethoscope because he knew nothing about it. This retort might be judged pertinent if the author had suggested that "olfactometry" had any diagnostic value unconnected with the sense of smell itself. This he does not do, and it appears to be wholly as an indication that the olfactory sense is in need of restoration or improvement that he regards it as useful. Even for that purpose, we may be permitted to doubt if it can prove of use.

The sense of smell, according to Lermoyez, is one of our most precious gifts. He says that without what he calls expiratory olfaction (the perception of odorous emanations projected into the nasal passages from behind) the flavor of articles of food and drink would not be perceived, and anorexia would be the inevitable result. No doubt the bouquet of wine has much to do with our enjoyment of it, and the expiratory olfaction of castor oil counts for something in causing that useful laxative's unpopularity; but we are not yet ready to believe that the gustatory sense is so dominated by the olfactory as our author would make out.

But it is not alone in the enjoyment of savory emanations that our sense of smell serves us, says M. Lermoyez; it enables us to take warning in the presence of such a poisonous agent as illuminating gas. Why, he asks, is not the gas deodorized, as it easily might be? Because, he answers, it would then take us unawares and either asphyxiate us or blow us up. This may be accounted a sufficient reason, but it may be questioned if it is the only one that appeals to the gas companies.

THE PRESIDENT AND THE MEDICAL PROFESSION.

Again has the President of the United States spoken words so appreciative and commendatory of the work of medical officers of the army and navy, that they ought to go far toward dissipating any hesitation that Congress may feel about enacting legislation for remedying defects in the service that have over and over again been brought to its attention. Neglect of such remedial legislation should no longer be tolerated by those who are entrusted with the legislative branch of the government, if we are to carry out without needless loss of life the work in warfare that we cannot hope to avoid altogether, now that we have outlying interests and responsibilities of such a magnitude.

News Items.

NEW YORK CITY AND STATE

The Roosevelt Hospital.—We learn that Dr. George L. Peabody has resigned as attending physician to the hospital and is to be succeeded by Dr. Frank W. Jackson; also that Dr. Robert Coleman Kemp has been appointed junior physician to the hospital.

The Geneva (N. Y.) Medical Society.—At the annual meeting, held on Thursday, January 4th, the following officers were elected: President, Dr. Charles D. McCarthy; vice-president, Dr. James J. Collie; secretary, Dr. John A. Spengler; treasurer, Dr. Charles F. Neider.

The Medical Society of the County of Richmond, N. Y., held its annual meeting at the Staten Island Academy, on Wednesday, January 10th. The programme included the discussion of questions in regard to the consolidation of the state societies, especially the increase of the dues.

The Medical Association of Troy and Vicinity.—At the annual meeting, held on Tuesday, January 2nd, the election of officers resulted as follows: President, Dr. H. C. Gordnier; vice-president, Dr. R. H. Irish; secretary and treasurer, Dr. E. W. Becker.

The Metropolitan Medical Society of New York.—At the annual meeting of the society the following officers were elected: President, Dr. Samuel M. Brickner; vice-president, Dr. Sidney Yankauer; secretary, Dr. L. Hauswirth; treasurer, Dr. I. Pierce Oberndorfer; corresponding secretary, Dr. Alfred Wiener.

The Saratoga (N. Y.) Medical Society.—At a meeting held at Saratoga on Friday, January 5th, the programme consisted of a symposium on Acute and Chronic Amygdalitis and Pharyngitis, divided as follows: *Ætiology and Pathology*, by Dr. G. S. Towne; *Symptoms and Diagnosis*, by Dr. U. E. Varney; *Treatment*, by Dr. W. B. Melick, Fort Edward; discussion, by Dr. Van Aernem, Dr. Sanford, and Dr. Humphrey.

The New York Neurological Society.—At the annual meeting, held on January 2, 1906, the following officers were elected for the ensuing year: President, Dr. Joseph Fraenkel; first vice-president, Dr. Adolf Meyer; second vice-president, Dr. J. Ramsay Hunt; recording secretary, Dr. Edwin G. Zabriskie; corresponding secretary, Dr. F. K. Hallock; treasurer, Dr. G. M. Hammond; councillors, Dr. M. Allen Starr, Dr. Charles L. Dana, Dr. Joseph Collins, Dr. J. Arthur Booth, and Dr. William M. Leszynsky.

The Section in Medicine of the New York Academy of Medicine will hold a meeting on the evening of Tuesday, January 16th. The following is the order for the meeting: Presentation of cases and specimens. Clinical Reports: A Case of Purpura, by Dr. T. Stewart Hart. Papers: (a) A Report on the Clinical Chemistry of the Blood in Various Diseases, by Dr. H. S. Carter, discussion opened by Dr. George A. Tuttle; (b) Some Relations of Chronic Intestinal Putrefaction to the Severe Anæmias, by Dr. C. A. Herter, discussion opened by Dr. E. K. Dunham. Election of Officers.

The New York Pathological Society.—The following programme was arranged for a meeting held on Wednesday evening, January 10th: Basocellular and Planocellular Cancer of the Tongue, Side by Side, by Dr. William N. Berkeley; Observations on the Spirochæta Pallida and a Rapid and Certain Method of Staining It, by L. B. Goldhorn; (a) Stenosis of the Aorta at the Juncture of the Isthmus, (b) Two Cases of Glanders, by Dr. Pappenheimer; (a) The Influence of Colloids upon the Activity of the Bile Salts on the Pancreas, (b) The Action of Photodynamic Substances upon Certain Toxines, by Dr. Simon Flexner; Election of Officers.

A Conference of Anaesthetists.—The interne anaesthetists of the Brooklyn hospitals have organized a conference. The first meeting was held at the Long Island College Hospital on the invitation of Dr. A. F. Erdmann, the visiting anaesthetist. Dr. Bull, on behalf of the house staff, after a formal welcome and statement of the object of the conference, introduced Dr. J. T. Gwathmey, of Manhattan, who demonstrated by a narcosis the use of his new vapor inhaler. The responses to the invitation for the first meeting encourage the belief that the conferences will be well attended. The Bushwick Hospital, through Dr. Woolsey, the consulting anaesthetist, has invited the conference to hold its January meeting at that institution.

The Medical Society of the County of Dutchess, N. Y.—

The annual and centennial meeting was held at Poughkeepsie, on Wednesday, January 10th. The following programme was arranged for the occasion: President's Address, by Dr. H. L. Cookingham, of Red Hook; Historical Sketch, by Dr. G. C. Bayley, of Poughkeepsie; Address, by Dr. Joseph D. Bryant, president New York State Medical Society, New York; The Physiology of Immunity and Its Practical Deductions, by Dr. John S. Wilson, of Poughkeepsie, health officer city of Poughkeepsie; A Retrospect in Modern Surgery, by Dr. W. G. Macdonald, of Albany, professor of abdominal surgery, Albany Medical College; Ulcer of the Stomach and Its Dietetic and Medicinal Cure, by Dr. A. Jacobi, of New York; Surgical Intervention in Benign Gastric Lesions, by Dr. A. J. McCosh, of New York; The Commitment of the Insane During the Past Century, by Dr. I. G. Harris, of Poughkeepsie, first assistant superintendent Hudson River State Hospital; The Early Diagnosis and Modifications in the Treatment of Tuberculous Coxitis, with Exhibition of Patients, by Dr. Dexter D. Ashley, of New York; Empyema, with Report of Cases, by Dr. J. Freston, of Milton; Report on a Diphtheria Epidemic, by Dr. D. H. MacKenzie, of Millbrook; Streptococcic Sore Throat, by Dr. D. B. Ward of Poughkeepsie; The Specialist and the General Practitioner, by Dr. L. C. Wood, of Poughkeepsie; Report of Five Cases of Intra-abdominal Hemorrhage, Operation, Recovery, by Dr. J. E. Sadlier, of Poughkeepsie; Malignant Growths in the Neck, by Dr. J. P. Grant, of Poughkeepsie; The Use of Patent Medicines, by Dr. F. J. Mann, of Poughkeepsie. The officers of the society are as follows: President, Dr. H. L. Cookingham, of Red Hook; vice-president, Dr. J. H. Cotter, of Poughkeepsie; secretary, Dr. R. W. Andrews, of Poughkeepsie; treasurer, Dr. D. B. Ward, of Poughkeepsie.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the week ending January 6, 1906:

	January 6.	
	Cases.	Deaths.
Measles	1,131	16
Diphtheria and croup	337	50
Scarlet fever	215	13
Smallpox	1	..
Chickenpox	155	..
Tuberculosis	342	150
Typhoid fever	40	11
Cerebrospinal meningitis	15	11
	2,235	251

Society Meetings for the Coming Week:

MONDAY, January 15th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, January 16th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y. (annual); Baltimore Academy of Medicine.

WEDNESDAY, January 17th.—New York Academy of Medicine (Section in Genitourinary Diseases); New York Society of Dermatology and Genitourinary Surgery; Woman's Medical Association (New York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society.

THURSDAY, January 18th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, January 19th.—New York Academy of Medicine (Section in Orthopaedic Surgery); Clinical Society of the New York Post Graduate Medical School and Hospital; New York East Side Physicians' Association; Manhattan Medical and Surgical Society (private); Baltimore Clinical Society; Chicago Gynecological Society.

PHILADELPHIA AND THE MIDDLE STATES

The North Branch Philadelphia County Medical Society at its December meeting elected Dr. Wendell Reber, chairman, and Dr. William H. Parke, clerk.

The Kensington Branch of the Philadelphia County Medical Society elected Dr. R. W. Bemis, chairman, and Dr. C. C. Moore, clerk.

The Gloucester (N. J.) County Medical Society.—The annual meeting of the society will be held at Paul's Hotel, Woodbury, N. J., on Thursday, January 18th, at 1.30 p. m.

Section in Otology and Laryngology of the College of Physicians, of Philadelphia.—Dr. Barton H. Potts was elected clerk at the last meeting of the Section in Otology and Laryngology of the College of Physicians.

The Clinical Society of the Elizabeth (N. J.) General Hospital, will hold its next meeting at the hospital on the evening of Tuesday, January 16th. The programme includes a paper on Tuberculosis, by Dr. S. A. Knopf, of New York.

Polyclinic Hospital.—The following statement represents the work of the Polyclinic Hospital for December, 1905: Patients admitted to house, 103; patients discharged, 109; new patients treated in dispensary, 1,395; total visits to dispensary, 6,710; accident ward, 554.

The Philadelphia Orthopaedic Hospital.—The annual meeting of the contributors to the Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases was held on January 1st. Mr. John W. Brock, Mr. Samuel V. Merrich, and Mr. Lawrence T. Paul were elected managers for three years.

The William Pierson Medical Library Association of Orange, N. J.—The second lecture for the season of 1905 and 1906 was to be given on Tuesday, January 9th, by Dr. J. Riddle Goffe, of New York, on the subject: A Medical Hero; A Sketch of Dr. Thomas Wakley's Struggle Against the Hospital Abuses of His Time.

The Free Distribution of Antitoxine inaugurated by Dr. Samuel G. Dixon, Commissioner of Health of Pennsylvania, is proving to be of benefit. From November 3rd to December 24th it had been administered in 160 cases, of which 22, or 13.75 per cent., were fatal. Without antitoxine the mortality varies between 36.48 and 48.44 per cent. In 53 cases immunizing doses were given.

The Cumberland (N. J.) County Medical Society, held its quarterly meeting on Tuesday, January 9th. The programme included a paper by Dr. E. S. Fogg on The Early Diagnosis and Prompt Treatment of Appendicitis. The paper was discussed by members of the society and by Dr. Charles P. Noble, of Philadelphia, who was present at the meeting. Dr. J. C. Applegate, of Philadelphia, gave a practical report on the progress made in obstetrics and gynaecology during the past year, and Dr. M. K. Elmer, of Bridgeton, made a report on surgery.

The Annual Meeting of the American Philosophical Society was held on January 5th. The following officers were elected: President, Dr. Edgar F. Smith; vice-presidents, George F. Banker, William B. Scott, Simon Newcomb; secretaries, I. Minis Hays, Edwin C. Conklin, Arthur W. Goodspeed and Morris Jastrow, Jr.; curators, Charles E. Doolittle, William P. Wilson, Albert H. Smyth; treasurer, H. La Barre Jayne; councillors (for three years), Patterson DuBois, Dr. Samuel Dixon, Ernest W. Brown, William Keith Brooke.

The Obstetrical Society of Philadelphia.—The following officers were elected at the recent annual meeting of the society: President, Dr. Wilmer Krusen; vice-presidents, Dr. F. Hurst Maier and Dr. G. U. Boyd; secretary, Dr. Frank C. Hammond; treasurer, Dr. J. W. West; curator, Dr. B. M. Anspach; council, Dr. Stricker Coles, Dr. L. J. Hammond, Dr. M. M. Franklin, and Dr. J. C. Da Costa; publication committee, Dr. W. E. Parke, Dr. Theodore A. Erck, Dr. Stricker Coles, and Dr. John G. Clark; library committee, Dr. Daniel Longaker and Dr. William R. Nicholson.

Scientific Society Meetings in Philadelphia for the Week Ending January 20, 1906.—Tuesday, January 16th, Section of Ophthalmology, College of Physicians; Dermatological Society; Academy of Natural Sciences; North Branch, Philadelphia County Medical Society. Wednesday, January 17th, Philadelphia County Medical Society, business meeting for members only; Section in Otology and Laryngology, College of Physicians; Association of Clinical Assistants, Wills Hospital; Franklin Institute. Thursday, January 18th, Section Meeting Franklin Institute. Friday, January 19th, University of Pennsylvania Medical Society; American Philosophical Society.

Charitable Bequests.—By the will of Hugh Leonard The Little Sisters of the Poor receive \$1,000, St. Joseph's Home

for Homeless Boys receives \$1,000 and St. John's Orphan Asylum receives \$1,000.

By the will of Anne E. Peale the Pennsylvania Hospital receives \$5,000 to endow a free bed for a female patient in the Department for the Insane. The Home for the Friendless, New York city, receives \$4,000. The United States Indian Industrial School, Carlisle, Pa., receives \$3,000 for the education and maintenance of Indian girls. The Pennsylvania School for Feeble Minded Children receives \$1,000. The Church Home for Children receives \$300. The Friends Asylum for the Insane, at Frankfort, receives \$7,000.

The Philadelphia Southern Dispensary.—The annual meeting of the contributors of the Southern Dispensary was held on January 2nd. The following officers of the Board of Trustees were elected: President, Mr. John S. Thomson; secretary, Mr. Clement R. Bowen; treasurer, Mr. Paul J. Field; Mr. George W. Pride, Dr. Napoleon Hickman, Mr. David Jameson, Dr. W. Joseph Hearn, Mr. John Middleton, Dr. E. Tillson Ward, Mr. Joseph A. Robbins, Mr. George May, and Mr. Charles J. Thomson. Dr. W. N. Seary was appointed resident physician and Dr. Walter S. Wrench was elected resident apothecary. Dr. Francis J. McCollough was appointed to the surgical clinic, Dr. R. G. Jackson and Dr. Henry J. E. Newman were appointed to the ear, nose and throat clinic, and Dr. S. H. Brown was appointed to the dermatological clinic. During 1905, 9,003 patients were treated.

The College of Physicians, of Philadelphia.—At the annual meeting of the College of Physicians, held January 3rd, the following officers were elected: President, Dr. Arthur V. Meigs; vice-president, Dr. James Tyson; censors, Dr. Richard A. Cleemann, Dr. S. Weir Mitchell, Dr. Horace Y. Evans, Dr. Louis Starr; secretary, Dr. Thomas R. Neilson; treasurer, Dr. Richard H. Harte; honorary librarian, Dr. Frederick P. Henry; councillors, to serve until January, 1909, Dr. J. Alison Scott, Dr. Francis R. Packard; committee of publication, Dr. G. G. Davis, Dr. Thompson S. Westcott, Dr. William Zentmayer; library committee, Dr. George C. Harlan, Dr. Francis X. Dercum, Dr. Charles A. Oliver, Dr. William J. Taylor, Dr. S. Weir Mitchell; committee on Mütter Museum, Dr. John H. Brinton, Dr. George McClellan, Dr. J. Alison Scott; hall committee, Dr. John K. Mitchell, Dr. Thomas H. Fenton, Dr. B. Alex. Randall, Dr. E. Hollingsworth Siter, Dr. A. O. J. Kelly; committee on directory for nurses, Dr. Wharton Sinkler, Dr. James C. Wilson, Dr. James V. Ingham.

The Section on General Medicine of the College of Physicians, of Philadelphia.—The following was the programme of the meeting of the Section on General Medicine of the College of Physicians, held on January 8th: Dr. George Dock, of Ann Arbor, Mich., read a paper entitled Clinical Observations on Exophthalmic Goitre (Graves's Disease), with Special Reference to Complete and Incomplete Forms, the Clinical Course, and the Treatment; Dr. James Tyson read a paper entitled The Medical Treatment of Exophthalmic Goitre; Dr. W. G. MacCallum, of Baltimore, read a paper entitled The Pathogenesis of Exophthalmic Goitre; Dr. Joseph C. Bloodgood, of Baltimore, read a paper entitled The Surgical Treatment of Exophthalmic Goitre. At the close of the meeting a reception was tendered Dr. Dock, Dr. MacCallum, and Dr. Bloodgood, which was well attended.

Concerning Tuberculosis.—From January 22nd to February 3rd the Henry Phipps Institute for the Study, Prevention and Treatment of Tuberculosis will hold an educational exhibition at Eighth and Chestnut streets. The following lectures will be given: Tuesday, January 23rd, Dr. Lawrence F. Flick, The Sociological Importance of Tuberculosis; Wednesday, Dr. Leonard Pearson, State Control of Tuberculosis; Thursday, Dr. Charles Dudley, of Altoona, The Railroad in Tuberculosis; Friday, Dr. W. B. Stanton, Tuberculosis in the School; Saturday, Dr. Howard S. Anders, Tuberculosis in the Store, address to salesmen and saleswomen; Monday, January 29th, Dr. H. R. M. Landis, Tuberculosis in the Workman, address to labor unions; Tuesday, Dr. Samuel McC. Hamill, Tuberculosis in Children, address to mothers; Wednesday, Dr. Thomas Darlington, president of the Board of Health, New York city, and Dr. William M. L. Coplin, director of the Department of Health and Charities, Municipal Control; Thursday, Dr. Charles J. Hatfield, address to medical students and nurses; Friday, Professor J. C. Wilson and Professor John H. Musser, address to physicians; Saturday, Dr. M. P. Ravenel, Hospitals, Sanatoria and Dispensaries.

The Annual Exhibition of the Philadelphia Pathological Society was held on January 11th and 12th. Among the exhibits of note were the following: American Society of Tropical Medicine, a series of parasitic organisms; German Hospital, acute and chronic cholecystitis and cholelithiasis; Jefferson Medical College, a series of specimens demonstrating such pulmonary lesions as gangrene, abscess, atelectasis, emphysema, tumors, etc.; also, a child showing extra-corporeal heart; Medico-Chirurgical College, a series of microscopic views illustrating experimental phagocytosis; Municipal Hospital, a series of brains and spinal cords illustrating the various types of cerebrospinal meningitis; a series of specimens showing the pathological conditions of the larynx met with in diphtheria; Pennsylvania Hospital, a series of specimens illustrating the lesions of typhoid fever; a series of specimens illustrating bone lesions; Philadelphia Hospital, specimens illustrative of ulcer and carcinoma of the stomach; Phipps Institute, a series of lesions illustrative of tuberculosis; a series illustrative of tuberculosis of the nervous system; University of Pennsylvania, General Pathological Laboratory, a series of gynecological specimens; Laboratory of Experimental Pathology, a series of microscopic views illustrating experimental thrombosis and experimental transplantation of tumors; Surgical Laboratory, a series of lesions illustrative of tumors of the breast; a series illustrative of acute and chronic pancreatitis; Ophthalmological Laboratory, a series of eyes illustrating various traumatic, inflammatory and neoplastic lesions; Clinical Laboratory, a series illustrating laboratory aids to diagnosis—urinalysis, cytodagnosis, blood specimens, instruments of precision, etc.

The Health of Philadelphia.—During the week ending December 30, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	3	0
Typhoid fever.....	136	14
Scarlet fever.....	54	1
Chickenpox.....	52	0
Diphtheria.....	72	8
Cerebrospinal meningitis.....	3	1
Measles.....	227	3
Whooping cough.....	6	1
Tuberculosis of the lungs.....	62	61
Pneumonia.....	81	56
Erysipelas.....	10	2
Pyæmic fever.....	2	0
Anthrax.....	1	0
Cancer.....	7	16

The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 7; dysentery, 2; diarrhoea and enteritis, under two years of age, 17. The total deaths were 491, in an estimated population of 1,438,318, corresponding to an annual death rate of 17.75 in 1,000 population. The total infant mortality was 120; under one year of age, 103; between one and two years of age, 17. There were 39 still births; 26 males and 13 females. The weather was quite mild, as the following table of temperature shows:

	Maximum.	Minimum.
December 24th.....	41	31
December 25th.....	37	27
December 26th.....	39	30
December 27th.....	42	32
December 28th.....	52	32
December 29th.....	56	45
December 30th.....	46	36

On the 29th there was a thunderstorm, which lasted about ten minutes, and which was attended with 0.60 inch precipitation.

BOSTON AND NEW ENGLAND.

The Medfield (Mass.) Insane Asylum.—Dr. Fred. B. Lund, of Boston, has been appointed a trustee of the institution.

The Portland (Me.) Medical Club.—At the regular meeting, held on the evening of Thursday, January 4th, a paper on The Mastoid Operation was read by Dr. John Allen.

The Medical Section of the Hartford (Conn.) Medical Society held a meeting on Monday, January 8th. The subject for discussion was Insomnia and Its Treatment. Dr. A. E. Abrams, Dr. T. D. Crothers, Dr. W. N. Thompson, Dr. E. C. Down, and others were expected to take part in the discussion.

The Hartford (Conn.) Medical Society.—At the annual meeting, held on Monday, January 1st, the following officers were elected for the ensuing year: President, Dr. A. E. Abrams; vice-president, Dr. William W. Knight; secretary, Dr. Arthur D. Hayes; assistant secretary, Dr. G. B. Brainard; treasurer, Dr. George K. Welch; librarian, Dr. Walter R. Steiner.

The New England Association of the New York City Medical Colleges held its annual banquet on December 28, 1905, at the Copley Square Hotel, with an attendance of about 60 members. Dr. J. A. Bruce, of Everett, was toastmaster. The following officers were elected: President, Dr. John C. Irish, of Lowell; vice-presidents, Dr. Daniel S. Adams, of Manchester, N. H.; Dr. Israel J. Clarke, of Haverhill, and Dr. Frank A. Hubbard, of Taunton; treasurer, Dr. J. S. Stuart, of Clarendon Street, Boston; secretary, Dr. Francis P. Emerson, of Boston.

The Franklin (Mass.) District Medical Society.—A meeting was held at Greenfield on Tuesday, January 9th, when the following programme was presented: Fractures Involving the Elbow Joint, by Dr. H. G. Stetson, of Greenfield; The Treatment of a Few Common Diseases, by Dr. G. L. Upton, of Shelburne Falls; The Treatment of Typhoid Fever: Have We a Specific? by Dr. J. E. Urquhart, of Ashfield. The society entertained as its guest Dr. Arthur T. Cabot, of Boston, president of the Massachusetts Medical Society.

The Boston Society of Medical Sciences.—At a meeting held on Tuesday evening, December 19, 1905, Dr. H. C. Ernst in the chair, Dr. T. H. Pratt gave the results of his work on blood plates. Dr. Henderson gave a detailed account of his researches as to why animal fluids are neutral and how this neutrality is maintained. Dr. Edward H. Nichols and Dr. Homer B. Smith, surgeons in charge of the Harvard football team, spoke on the Physical Aspects of American Football. Dr. Smith demonstrated with lantern slides some new methods of handling knees and clavicles and Dr. Nichols spoke on the injuries received in the game and their results.

Boston to Have a New Floating Hospital.—Boston will have a new floating hospital next summer, to take the place of the barge Clifford, which has done such good work for the sick children of Boston every summer since July 25, 1894. The new boat is to be 170 feet by 46½ feet. There will be four decks. The main hospital deck will comprise six large wards, giving in all 100 beds for permanent patients. The ward in the bow will be devoted to convalescents, being admirably adapted to that purpose. The ward in the stern is an out-of-door ward. The top deck is for the day patients principally, and will accommodate 150 to 200. Work on the boat will be pushed, in order that it may be ready in July for the season's work.

A Conference on the Milk Supply of Cities.—The Boston medical library society, in conjunction with the Suffolk district branch of the Massachusetts medical society, held a meeting at the library on Wednesday evening, December 20, 1905, Dr. George W. Gay, chairman for the evening. The subject for consideration was the milk supply of large cities. Dr. Charles Harrington, secretary of the Massachusetts state board of health, read a paper on The Sanitary Importance of Clean Milk. Professor R. A. Pearson, of Cornell University, spoke on What Are the Influences in Favor of Better Market Milk. Dr. George W. Goler, health officer of Rochester, N. Y., read a paper on The Organization, Conduct and Results of Municipal Milk Work in Rochester. The papers were illustrated with lantern slides. A motion relating to the establishment of a milk commission was presented by Dr. Harrington.

The Mortality of Boston.—The total number of deaths reported to the board of health for the week ending December 30, 1905, was 213, against 169 the corresponding week last year, showing an increase of 44 deaths, and making the death rate for the week 18.67. Of this number 117 were males and 96 were females; 208 were white and 5 colored; 120 were born in the United States, 85 in foreign countries, and 8 unknown; 33 were of American parentage, 153 of foreign parentage, and 27 unknown. The number of cases and deaths from infectious diseases reported was as follows: Diphtheria, 50 cases and 2 deaths; scarlatina, 46 cases and 2 deaths; typhoid fever, 15 cases and no deaths; measles, 153 cases and 4 deaths; tuberculosis, 31 cases and 23 deaths. The deaths from pneumonia were 42, heart disease 25, bronchitis 10 and marasmus 4. There were 11 deaths from violent causes. The number of children who died under one year of age was 45; the number under five years of age was 65. The number of persons who died over sixty years of age was 47. The deaths in public institutions were 62.

BALTIMORE AND THE SOUTH.

The Lincoln (Miss.) County Medical Association.—At the recent annual meeting, held at Brookhaven, the follow-

ing officers were elected for the ensuing year: President, Dr. J. W. Bennett; vice-president, Dr. S. G. Wilson; secretary and treasurer, Dr. W. H. Frizell.

The Cabell (W. Va.) County Medical Society.—The following programme was prepared for a meeting held on Thursday, January 11th: Remarks on Sectarian Medicine, by the president, Dr. Archibald Crary; Tetanus, by Dr. C. R. Enslow; Extrauterine Pregnancy, by Dr. H. A. Brandebury.

The Richmond (Va.) Academy of Medicine and Surgery.—The next meeting of this academy will be held on Tuesday, January 16th, when the subject for discussion will be Kidney Stones and Pyelitis. Dr. B. L. Taliaferro will discuss Diagnosis and Dr. Lewis C. Bosher will speak on Treatment. The annual installation of officers will occur at this meeting.

A Reception to Dr. William Osler.—Dr. Osler was tendered a reception by the board of trustees of the Johns Hopkins Hospital and University at the hospital, on North Broadway, Baltimore, on Saturday, January 6th, from 4.30 o'clock to 6 o'clock, during which time Dr. Osler met many of his friends and former associates. The reception was of the most informal character, and it took place in the rotunda of the main building. Dr. Osler is expected to remain in Baltimore about a month. He will devote much of his time to hospital work and may hold a number of clinics.

The Marshall (Miss.) County Medical Society held a meeting at Holly Springs on Tuesday, January 2nd. The election of officers resulted as follows: President, Dr. S. C. Goholston, of Holly Springs; vice-president, Dr. C. L. Hayes, of Byhalia; secretary and treasurer, Dr. R. A. Seale, of Holly Springs; delegates to the State Medical Association, Dr. F. P. Boatner, of Potts Camp, and Dr. W. C. Elliott, of Holly Springs. The feature of the meeting was the adoption of resolutions to the effect that the association requested the Marshall County representatives in the Mississippi legislature to pass a law requiring all patent medicines sold in the State of Mississippi to have printed formulas on the labels, so that people may know what they are taking when they use patent medicines.

The Crawford W. Long Memorial Association.—The executive committee of the association, appointed by the Georgia Medical Association to attend to the matter of raising funds for a suitable monument for Dr. Crawford W. Long as the discoverer of anæsthesia, to be placed in the Hall of Fame at Washington, held a meeting in the capitol at Atlanta on Tuesday, January 2nd. Dr. Willis F. Westmoreland, chairman, presiding. It is the purpose of the committee to raise a substantial fund and then ask the legislature for an appropriation. The members of the memorial association are as follows: Dr. Willis F. Westmoreland, of Atlanta, chairman; Dr. W. W. Owens, of Savannah; Dr. Alexander Mack, of Decatur; Dr. J. D. Chason, of Bainbridge; Dr. F. M. Ridley, of La Grange; Dr. Floyd W. McRae, of Atlanta; Dr. H. J. Williams, of Macon; Dr. R. M. Harbin, of Rome; Dr. S. C. Benedict, of Athens; Dr. L. G. Hardman, of Commerce; Dr. J. B. Morgan, of Augusta, and Dr. Charles Hicks, of Dublin.

The Mortality of Baltimore.—The report of the health department for the week ending December 30, 1905, shows a total of 191 deaths, as compared with 182 for the corresponding week of last year, 214 in 1903 and 183 in 1902. The annual death rate in 1,000 of population was: Whole, 17.59; white, 14.68; colored, 33.26. The principal causes of death were: Typhoid fever, 1; measles, 1; whooping cough, 2; diphtheria, 3; influenza, (la grippe), 1; consumption, 28; cancer, 9; apoplexy, 2; organic heart diseases, 14; bronchitis, 4; pneumonia, 36; diarrhœa, 1; Bright's disease, 12; congenital debility, 13; lack of care, 4; old age, 3; suicides, 1; accidents, etc., 10. The following number of cases of infectious diseases were reported, as compared with the corresponding week of last year:

1904.	1905.	1904.	1905.
Smallpox	11	Mumps	2
Diphtheria	18	Whooping cough	1
Scarlet fever	21	Chickenpox	8
Typhoid fever	16	Consumption	10
Measles	9		12

The report of the health department for the week ending January 7, 1906, shows a total of 201 deaths, as compared with 192 the corresponding week of last year, 235 in 1904 and 217 in 1903. The annual death rate in a thousand of population was: Whole, 17.61; white, 16.26; colored, 24.82, and the principal causes of death were:

Typhoid fever	2	Diphtheria	7
Scarlet fever	2	Pneumonia	5
Whooping cough	1	Diarrhœa	1
Influenza	1	Bright's disease	17
Consumption	23	Congenital debility	14
Cancer	19	Old age	3
Apoplexy	2	Accidents, etc.	14
Heart diseases	13		

The following numbers of cases of infectious diseases were reported, as compared with the corresponding week of last year:

1905.	1906.	1905.	1906.
Smallpox	6	Measles	5
Diphtheria	21	Mumps	1
Group	1	Whooping cough	10
Scarlet fever	20	Chickenpox	7
Typhoid fever	1	Consumption	12

CHICAGO AND THE WEST.

The Illinois State Board of Charities.—Dr. Frank Billings, of Chicago, has declined to accept the presidency of the state board of charities, tendered him by Governor Deneen.

The Death Rate of Cleveland (O.) in 1905.—Cleveland's death rate for the year 1905 was 14.6, as compared with 15.6 for the year 1904, according to the annual report of the board of health. There were 52 fewer deaths last year than in 1904. The total deaths for last year were 6,424. There were 496 deaths from pneumonia, as compared to 563 in 1904. Tuberculosis caused 596, as compared to 642 for the preceding year. Typhoid fever claimed 67 victims. In 1904 there were 203.

The Michigan College of Medicine and Surgery.—At the annual meeting of the board of trustees, held at Detroit on Tuesday, January 2nd, the following officers were elected: President, Dr. Hal C. Wyman; vice-president, Dr. Dayton Parker; secretary and treasurer, W. P. Holliday; trustees, M. M. Stanton, Dr. William I. Hamblin, Dr. Lewis Maire, and Dr. Willard Cheney. Dr. William Stapleton was made professor of surgical anatomy; Dr. Burton Parker, professor of physiology; Dr. Noah Aronstam, professor of dermatology, and Dr. George Gordon, professor of anatomy. Dr. Wyman's election to the presidency was for the nineteenth time.

GENERAL

The Medical Corps of the United States Navy.—According to the new Navy Register the following are the senior officers of the medical corps: Medical Director A. F. Price, Medical Inspector E. Z. Derr, Surgeon George P. Lumsden, Passed Assistant Surgeon Edward G. Parker, Assistant Surgeon J. P. De Bruler, and Acting Assistant Surgeon W. P. Keene.

American Tuberculosis Exhibition.—To those who did not get the opportunity to see the exhibition of the American Antituberculosis Society at the American Museum of Natural History, the current number of *Charities* (January 6, 1906) will prove of interest. Here Dr. M. L. Price, of Maryland, has contributed an interesting and short illustrated article which cannot fail to be appreciated as evidence that the right way is being found to successfully cope with the "Great White Plague."

The Inadequacy of the Medical Corps of the Army.—Following the presentation of a medal of honor by President Roosevelt, on January 10th, to an officer who rendered distinguished services during the Spanish War, the President, in the presence of the Secretary of War, the Lieutenant-General of the army, the heads of all the staff departments of the army, and the legislative committee of the American Medical Association, to whom he delivered an informal address. In the course of his remarks he declared that if the United States were to go to war to-morrow the medical corps of the army would be absolutely crippled for want of a sufficient number of surgeons. Among other things the President said: If we had a war break out to-morrow and had to raise any large army there would be an immediate breakdown in the medical department, simply because at present our medical corps is numerically only fit to take care of about 40 per cent. of the regular army as it is now. The medical corps is not numerically fit to grapple with a campaign in which our whole army, little as it is, should be employed. And of course if we had to mobilize an army of volunteers we would, under present conditions, have to count upon widespread disaster through the shortcomings in the medical and sanitary and hygienic arrangements rendered inevitable by our present lack of preparation.

Pith of Current Literature.

AMERICAN MEDICINE.

January 6, 1906.

1. Prognosis in Tuberculosis, By LAWRENCE F. FLICK.
2. Tuberculosis of the Thoracic Duct and Acute Miliary Tuberculosis, By WARFIELD T. LONGCOPE.
3. Feeding the Baby, By WARD B. HOAG.
4. Priapism a Symptom in Leucæmia; Report of Case, By P. L. GUNCKEL.
5. Fatal Hæmatemesis, the Result of Chronic Gastric Ulcer, By FRANK HALL MURDOCH.
6. Ruptured Ectopic Pregnancy Complicated with Appendicitis; Operation, By B. F. STEVENS.
7. Correlation of Medical Teaching, By F. F. WESBROOK.

2. **Tuberculosis of the Thoracic Duct and Acute Miliary Tuberculosis.**—Longcope, after reviewing the literature, cites 30 cases of tuberculosis in which especial attention was paid to the study of the thoracic duct as a possible point of origin for the generalized process. He thinks that apparently the same series of events takes place in these cases. In a certain number of instances tubercle bacilli are carried to the thoracic duct from adjacent tuberculous lymph nodes. Here they lodge and produce a localized subacute or chronic lesion. Sooner or later this nodule breaks down and enormous numbers of tubercle bacilli are liberated and swept by the lymph into the general circulation, producing an acute and rapidly fatal general tuberculosis. It is of great frequency in cases of acute generalized tuberculosis.

6. **Ruptured Ectopic Pregnancy Complicated with Appendicitis; Operation.**—Stevens describes a case in which a pregnant woman had three severe attacks of intense pain in the right lower quadrant of the abdomen with vomiting and chill and signs of moderate shock. Upon the first attack the diagnosis was of a suspected ruptured extrauterine gestation sac; operation was advised, but refused, as the patient felt entirely well the next day. Seven weeks later she had a similar attack in the right side. Vaginal examination showed the same tumor as before. A diagnosis of appendicitis was made and operation advised, but again refused. A week later she had the third attack and now agreed to an operation. A hæmatoma in the right broad ligament was found, and removed, as was the inflamed cedematous appendix. The patient recovered. The author thinks that the first attack marked the rupture of the gestation sac, while the other two attacks were due to the appendicitis.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

January 4, 1906.

1. The Physical Aspect of American Football, By EDWARD H. NICHOLS and HOMER B. SMITH.
2. Fractures of the Superior Maxillary Bone Caused by Direct Blows Over the Malar Bone. A Method for The Treatment of Such Fractures, By HOWARD A. LOTHROP.
3. Puerperal Septicæmia, By E. H. STEVENS.

1. **The Physical Aspect of American Football.**—Nichols and Smith give their experience as physicians to the football squad of Harvard University during the last football season, extending from September 14, to November 25, 1905. Each player was required to report every injury, no matter how trivial it seemed to him, to the surgeon in charge. The list of the injuries received were 145. The authors outline their work of treatment and come to the following conclusions: (1) The number, severity, and permanence of the injuries which are received in playing football are very much greater than generally is credited or believed. (2) The greater number of the injuries come in the "pile" and not in the open plays, although serious injuries are received in the open. (3) The number of injuries is adherent in the game itself, and is not due especially to close competition, as is shown

by the fact that the proportion of injuries received in games and in practice is about the same. (4) A large proportion of the injuries is unavoidable. (5) The proportion of injuries is incomparably greater in football than in any other of the major sports. (6) The game does not develop the best type of men physically, because too great prominence is given to weight without corresponding nervous energy. (7) Constant medical supervision of the game where large numbers of men are engaged is a necessity and not a luxury, although it is a question if a game, requiring the constant attendance of two trained surgeons, is played under desirable conditions. (8) The percentage of injury is much too great for any mere sport.

2. **Fractures of the Superior Maxillary Bone Caused by Direct Blows Over the Malar Bone. A Method for the Treatment of Such Fractures.**—Lothrop states that if the fracture of the superior maxilla is unsuspected and is treated as contusion, recovery will be complete in every respect except that there will remain a varying degree of permanent deformity. There are two methods of treatment: (1) An outside incision for the purpose of inserting an instrument into the bone by means of which it may be drawn out into place. But this mode is not satisfactory. (2) Blunt instruments have been introduced by the mouth under the zygomatic arch and by this means the malar has been elevated to its proper place. The writer thinks that his new method is superior. It consists in elevating the malar together with the various fragments of the maxilla, working through a small opening in the mandible fossa. This operation is described and the history of seven cases are given as illustration.

3. **Puerperal Septicæmia.**—Stevens reviews the different styles and works advocated by the writers for the treatment of puerperal septicæmia. He uses an extra large forceps made for the purpose to wipe out the interior of the uterus. Since the introduction of Reynold's long uterine curette he is using this. He thinks that his method gives much better results than the simple washing out of the uterus.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 6, 1906.

1. The Dietetic Treatment of Nephritis, By F. C. SHATTUCK.
2. Albuminuria in Nephritis and Bright's Disease, By ALFRED STENGEL.
3. Cylindruria (to be continued), By CHARLES T. EMERSON.
4. A Study of Brain Infections with the Pneumococcus, By E. E. SOUTHARD and C. W. KEENE.
5. The Dumb-bell Intestinal Anastomosis. A Preliminary Report on a New Mechanical Device and a New Method for Either Intestinal Approximation or Anastomosis with the Stomach, By JOSEPH B. BACON.
6. Röntgen Diagnosis of Diseases of the Lungs, By G. E. PFAHLER.
7. First Aid to the Injured; Its Importance to Railroads from a Humane and Economic Standpoint, By MARCUS H. THOMAS.
8. The Treatment of the Results of Infantile Paralysis, By PRESCOTT LE BRETON.
9. Disorders from Eye Strain, By OVIDUS ARTHUR GRIFFIN.
10. An Analytical Study of Uræmia with Some General Conclusions in Regard to its Cause and Treatment, By ALFRED C. CROFTON.
11. A Case of Traumatic Aneurism of the Right Renal Artery, with a Review of Literature, By PENN-GASKEL SKILLOM.

1. **The Dietetic Treatment of Nephritis.**—Shattuck says that, as we are powerless to directly influence the kidneys by drugs, we should lay the greatest stress upon diet. Rest is the important remedy for the kidneys. He comes to the following conclusions: It must be our aim to spare the kidneys unnecessary work, not forgetting that the urinary is but one of the systems which comprise the body. In acute nephritis, as well as in

acute exacerbations of the chronic forms, drugs, diet, and rest should work together. Starvation for a few days, proportional to the intensity of the process and the strength of the patient, is the keynote of the dietetic management. In the chronic forms we seek to lengthen and lighten life, an aim often largely within our power of attainment. Especially in the contracted form of kidney disease many years of life, much of the happiness which comes from achievement, days and nights of comfort, may hinge on our skill in adapting sound principles to the particular case and in securing the cooperation of the patient in carrying out the same, persistently, not spasmodically. Dietary restriction should be in the main quantitative rather than qualitative. Alcohol in moderation is not necessarily a poison and may be an aid to digestion. The excess of proteid, not proteid in itself, is harmful to the chronically sick kidney. A varied is more likely than a monotonous diet to promote the manufacture of good blood and thus to promote good nutrition of the body in general and of the myocardium in particular. The amount of albumin is in itself no guide as to the extent of dietary restrictions.

2. Albuminuria in Nephritis and Bright's Disease.—Stengel wishes to direct attention to the fact that albuminuria is an extremely common occurrence in various general diseases, and that, though it may in a sense indicate an inflammatory condition of the kidney, such inflammation or nephritis may be of merely pathological rather than of clinical significance. It is important in all cases of suspected renal disease that the urine be repeatedly examined and its constant or fluctuating condition be taken into account.

4. A Study of Brain Infections with the Pneumococcus.—Southard and Keene report the history and their findings of twelve cases of human brain infection of the pneumococcus, together with the results of inoculation of the pneumococcus in the brains of guinea pigs. Clinically viewed, the author says, the cases were quite ill assorted, including a great variety of observations. Anatomically viewed, the pneumococcus produces in the meninges and the brain substance of man a type of inflammation, in which cellular exudation and fibrin formation are prominent. The post mortem picture varies from focal or diffuse red softening to prevalent leptomeningitis and ependymitis and occasionally abscess formation. The meningeal exudate is almost constant on the convexity. The base, the ventricles, and the cord are frequently involved. The inoculations in the guinea pig as a rule did not produce a clinical sign. It was a general but not constant tendency to produce exudates with a high proportion of mononuclear cells of the phagocytic series.

5. The Dumb Bell Intestinal Anastomosis.—Bacon describes his method of intestinal anastomosis, with which he has made experiment on pigs. He uses dumb bells of three different sizes with a canal inside, made of aluminum, they are therefore very light. The rubber ligature should be firmly wrapped around the tissues and the dumb bell twice, then securely tied with several knots. The advantages of this operation are in the author's opinion: 1. Simplicity of construction and operation with absolute safeguard against leakage. 2. The short time in which the operation can be performed with a minimum amount of cicatricial tissue which ultimately remains. 3. The light weight, size, and shape of the dumb bell which will be evacuated from four or six days, as the connective tissue will all have been uniformly necrosed by that time.

6. Roentgen Diagnosis of Diseases of the Lungs.—Pfahler observes that the diagnostic value of the evidence of diseases of the lungs obtained through the Röntgen ray depends very much on the skill and experience of the operator. Much harm has been done

both in diagnosis and treatment by physicians who did not possess the proper training and knowledge.

8. The Treatment of the Results of Infantile Paralysis.—Breton states that the results of infantile paralysis are of a mechanical nature. It is often possible to predict what deformity will ensue, according to the groups of muscles involved. After a careful examination the physician is able to prevent deformity. Emphasis should be laid on the proper apparatus which is to be preferred to operation. Patients should be watched for years, as conditions change and vicious habits may be acquired by the child.

MEDICAL RECORD.

January 6, 1906.

1. Rupture of the Oesophagus Resulting from External Traumatism. By EDWARD L. LOMAX.
2. Acute Yellow Atrophy of the Liver Following Eclampsia. By L. T. ROYSTER and CHARLES N. GRANDY.
3. Selective Absorption by the Cell. By WILLIAM F. WAUGH.
4. Eyes and Ears That Might Be Saved. An Appeal to the General Practitioner. By SAMUEL S. WALLIAN.
5. Nailing the Head of the Humerus for Fracture of the Surgical Neck, with Report of a Case, By H. A. HAUBOLD.
6. Sutures and Their Preparation. By W. H. WATERS.
7. Radium, Its Known Medical Value, By MYRON METZENBAUM.

1. Rupture of the Oesophagus Resulting from External Traumatism.—Lomax cites a case of a woman who was injured by having the body caught between the trap door of a safety elevator and a brick wall. There was no fracture of the extremities or ribs, but an abdominal wound, which was closed by suture, and an irregular bruised area over the left breast and many bruises and abrasions on the body and extremities. She was cyanotic and complained of a dull pain in the lower left mammary region. She was kept under observation. Six hours after the accident she partook freely of clam broth and milk. She then complained of severe pain in the left side of the thorax, respiration became jerky, pulse accelerated and weak. She died eleven hours after the accident. The post mortem examination revealed a rupture of the oesophagus with escape of the stomach contents into the left pleural cavities, and a multiple fracture of the pelvis, which had been suspected by well marked crepitus, especially at the symphysis pubis. From this case the author calls the attention to the possibility of rupture of the oesophagus from external traumatism.

4. Eyes and Ears That Might Be Saved.—Wallian calls the attention to the atrophy of the optic nerve. The causes of the atrophy are varied and dissimilar, it may be septicæmia, hæmorrhages, benign or malignant neoplasm, circumscribed paralysis, sudden shock to the nervous system, cerebrospinal meningitis or albuminaria retinitis. But whatever the primary cause may be, the essential resultant is starvation of the sense. Such patients should have a special dietary prescribed for them, which must be rich in phosphates and nerve nourishing elements. Among the phosphorus bearing foods are the chief, entire wheat and yolk of eggs. The question of refuse in the food should be looked after. A great amount of distilled water not containing mineral salts, should be taken between meals. A Turkish bath may be of good use. Radium may be of use also, although it is impossible to determine its results.

5. Nailing the Head of the Humerus for Fracture of the Surgical Neck with Report of a Case.—Haubold reports a case of fracture of the head of the humerus, the head of the bone being in the glenoid cavity but not rotating with the shaft of the humerus. Under chloroform narcosis the deltoid was separated from the pectoralis major, the fragments were brought with a great deal of force into apposition and a five

inch steel nickel plated nail was driven, using a small skin incision at the outer edge of the acromionous process, through the head of the bone into the shaft. Three fourths of an inch of the nail with its head was permitted to protrude. Drainage was established and the wound dressed. A week later a plaster of Paris dressing was employed with a window at the site of the incision and another at the nail's head. Four weeks later the nail was readily removed without disturbing the cast. The healing was good and eight months later there was only a slight limitation to the motility of the shoulder.

7. Radium, its Known Medical Value.—Metzenbaum reviews the literature regarding the value of radium in medical use and adding to this résumé his own experience he comes to the following conclusions: (1) Lupus responds promptly to the action of radium. (2) Small epitheliomata, without glandular involvement, heal rapidly under the action of radium rays, while large epitheliomata do not seem to be influenced. (3) Rodent ulcers of the face and head respond best to radium treatment. (4) Certain cases of total blindness, possibly when some of the fibres of the optic nerve still remained intact, a sensation of light may be noted when a tube of radium of high activity is placed in front of the eye or against the temporal region. But thus far radium has given no beneficial results in the treatment of blindness. (5) Radium cannot be used like x ray to obtain skiagraphs, for it requires at least twelve hours' exposure before the rays penetrate the hand.

BRITISH MEDICAL JOURNAL

December 23, 1905.

1. Retrospects and Prospects Relating to University Life. (Mitchell Banks Lecture), By R. HARRISON.
2. Modern Fashions in Surgery, By J. L. THOMAS.
3. Remarks on the Value of the Sigmoidoscope in the Diagnosis Between Primary and Secondary Colitis, By P. L. MUMMERY.
4. Wandering Spleen; Hæmorrhage Within the Capsule; Splenectomy; Recovery, By C. P. CHILDE.
5. Some Observations on Puerperal Eclampsia, By R. DUNLOP.
6. The Surface Tension of Urine in Health and Disease, with Special Reference to Icterus, By W. D. DONNAN and F. G. DONNAN.
7. Remarks on a Case of Detachment of the Retina, By J. A. CRAIG.

3. The Sigmoidoscope in Colitis.—Mummery states that colitis is not infrequently mistaken for a disease, when it is merely a symptom. Chronic diarrhœa or the frequent discharge of mucus with the stools do not alone constitute colitis. The diagnosis of colitis rests upon: (1) An examination of the stools, supplemented by a report on their chemical and microscopical characters; (2) an examination of the abdomen; and (3) an examination of the bowel. Abdominal examination may reveal some condition to which the colitis is secondary or accessory, such as a chronically inflamed or thickened appendix, a freely movable kidney which pulls or drags on the colon. A careful digital examination of the rectum should always be made to exclude any rectal cause for the symptoms. It is now possible by means of the electric sigmoidoscope to examine the whole of the rectum and the greater part of the pelvic colon directly. Serious errors in diagnosis can often be thus avoided, and definite information obtained upon which a line of rational treatment can be based.

4. Wandering Spleen: Splenectomy.—Childe reports the case of a woman, aged fifty-four years, suffering from a tumor in the lower abdomen, occupying the false pelvis, and extending higher on the left side than on the right. It could be moved from side to side, but could not be pushed up at all. The tumor apparently contained fluid and there was a history of an acute attack of pain and vomiting. A diagnosis was made of

ovarian cyst. On opening the abdomen the tumor was found to be a wandering spleen with a large blood cyst attached thereto. The pedicle was tied off in sections, and the spleen removed. No shock followed the operation, and a normal recovery ensued. Splenopexy or fixation of the spleen could not be adopted, because of the impossibility of returning the organ to its proper position and of keeping it there. In some cases of splenectomy, ultimate ill effects occur, among them symptoms of weakness, emaciation, thirst, and drowsiness. In the case here recorded, one year has elapsed since the operation, and the patient has suffered no inconvenience at all from the removal of the spleen. Blood examination showed a relative decrease in the lymphocytes. Possibly spleniculi were present which were not observed.

5. Puerperal Eclampsia.—Dunlop's paper is based on a study of fifty cases of puerperal eclampsia. Œdema was present in thirty cases, but it is no criterion of the imminence of convulsions. It may be present for weeks or months, but an intense toxæmia may occur so rapidly that convulsions forestall œdema. The swelling is more significant when affecting the cellular tissues of the face. One of the most important, suggestive, and unequivocal of the prodromal symptoms is pain in the epigastrium. It occurred in seventeen out of thirty-three cases. It is like headache, in that it may be present intermittently and not very acutely—but when either becomes intense and constant it is unmistakable evidence that the toxæmia is far advanced. The convulsions may last as long as twenty minutes. In all the cases actually seen by the writer a very rapid involution of the uterus took place, the fundus reaching to the brim of the pelvis from the fourth to the sixth day. Even without manual control of the fundus during the third stage and after, the uterus at once retracts firmly. The death rate from eclampsia in the Glasgow Maternity Hospital has fallen from forty to twenty-five per cent., following the introduction of saline infusion. The solution, consisting of one drachm each of sodium chloride and sodium acetate to the pint of water, sterilized and at 100° F., is run into the areolar tissue beneath the breast, or, after delivery, into the lax abdominal wall. Infusion of salines may, however, be overdone. Peripheral irritation is a bad thing in eclampsia, whether caused by uterine contractions or obstetrical operations. If the labor be well advanced and the os dilated, forceps delivery under chloroform will cause less irritation than a succession of labor pains in the second stage. But when the convulsions occur early in labor, it is a difficult question. Delivery has no definite influence in cutting short the convulsions.

6. Surface Tension of Urine.—Donnan and Donnan have investigated the changes in the surface tension of urine which occur in health and disease. It has long been known that the surface tension of the urine is markedly diminished in jaundice. The apparatus used consisted of a special pipette by means of which the number of drops formed from a given quantity of urine at a given temperature, could be determined. The lower the surface tension the higher the number of drops. A high surface tension is associated with a comparatively low density. The urine passed in the morning usually has a low surface tension. Unusual exercise produces a great fall and a rise of density. The bile salts lower the tension markedly, probably exerting an emulsifying action on the fats contained in the intestine.

LANCET.

December 23, 1905.

1. The Albuminuria of Pregnancy and the Kidney of Pregnancy, By G. F. BLACKER.
2. A Case of Chronic Pancreatitis Probably Starting in an Accessory Pancreas, By A. W. M. ROBSON.

3. The Surgical Treatment of Tuberculous Glands in the Mesentery, By E. M. CORNER.
4. Carcinoma of the Testicle, By A. G. R. FOULERTON.
5. Huntington's Chorea and Dementia, By R. JONES.
6. Some Remarks on the Prevention of Appendicitis, By W. J. TYSON.
7. On Raw Meat Alimentation in Tuberculosis, By R. W. PHILIP.
8. Ventral Fixation of the Uterus by a New Method, By W. G. RICHARDSON.

1. **Albuminuria of Pregnancy.**—Blacker states that there are three main causes for the presence of albumin in the urine in pregnancy: 1. Congestion of the kidneys. 2. Toxic poisoning. 3. True Bright's disease—the so called renal albuminuria. Albuminuria occurs in from one to two per cent. of all cases of pregnancy. The so called kidney of pregnancy may be due to congestion, pressure, toxæmia, or anæmia. The most constant symptom of the kidney of pregnancy is albuminuria; the amount may vary from one half to one tenth of the urine examined. Oedema of the lower limbs is constantly present, and the patients complain of headache, at first intermittent, later continuous. Failure of vision is frequent, amounting merely to a diminution of sight in most cases. Vomiting is not constant nor usually severe. The kidney of pregnancy exposes the patient to three dangers: eclampsia; the development of chronic nephritis; and the danger of partial or complete loss of sight. Only a small number of the patients develop chronic nephritis (about 6 per cent.). The kidney of pregnancy tends to recur in subsequent pregnancies, mainly when it occurs for the first time in the early months of pregnancy. The prognosis, if properly treated, is decidedly good. If the oedema continues, the vision remains impaired, the albumin does not diminish, then the outlook is very grave. If the symptoms remain after the induction of premature labor, the patient is liable to develop eclampsia, chronic nephritis, or uræmia. The treatment is that of acute Bright's disease. A woman suffering from chronic nephritis should be recommended not to marry, or, if they insist, not become pregnant.

3. **Tuberculous Mesenteric Glands.**—Corner states that the surgical removal of tuberculous glands from the mesentery of the intestine can be followed by complete success, and points out the danger of delay. The mesenteric glands are the second most frequent source of general tuberculous infection of the body. But the glands must form a palpable mass before they should be submitted to surgical treatment. Great care must be exercised in distinguishing tumors due to tuberculous peritonitis from those due merely to tuberculous glands. Medical treatment should be pursued throughout. Mesenteric tuberculous glands are far more frequently found in children than in adults. In conclusion, the author cites a number of illustrative cases to support his assertion that there is a stage in cases of abdominal and mesenteric tuberculosis which is amenable to surgical treatment and to no other.

6. **Prevention of Appendicitis.**—Tyson holds that appendicitis has much increased of late years. The real starting point of the appendicular peritonitis is the presence of the *Bacillus coli communis* in the appendix. But there must also be some lesion of the appendix to allow the escape of the bacillus, and the bacillus must be in a state of virulency. Ordinary or simple catarrh of the appendix is of common occurrence and generally leads to no symptoms. The writer maintains that the purely surgical treatment of the disease is treatment at the end of it. Scientific and sound treatment should aim at its prevention or cure in its very early stages. The most prominent and active cause of appendicitis is constipation—a lodgment of undigested matter or fecal masses in the bowel. It is the experience of many patients that when the bowels have not been opened an attack of appendicitis is likely

to occur. In days gone by the regular dosage with salts and black draught probably had a great deal to do with the prevention of intestinal toxæmia. The author strongly approves of the exceedingly common continental custom of periodical visits to mineral water springs. Such regular washing out of the intestinal canal does much to prevent colitis and appendicitis.

7. **Raw Meat in Tuberculosis.**—Philip has employed raw meat alimentation in tuberculosis with excellent results. But to be effective, such alimentation must be systematic and continued. The meat is usually ordered in one of three ways: 1. Pounded raw meat, slightly seasoned with salt, served thrice daily. The meat must be perfectly fresh. 2. Beef juice, either extracted with water, or by means of pressure. 3. Raw meat soup, made by mixing minced meat with milk. The results of such a diet in tuberculosis is summarized as follows: 1. The general appearance quickly improves. 2. The soft flabby muscles fill up and become firmer, the sense of fatigue lessens, as does also the myotatic irritability. 3. The pulse rate is lessened, and the blood pressure improved. 4. There is a rapid increase in the amount of hæmoglobin in the blood, and a remarkable increase in the digestive leucocytosis. Hæmoptysis does not follow the adoption of the method. 5. The gastrointestinal functions become more effective, and intestinal metabolism is simpler and more complete, the stools improving in character. 6. The temperature is favorably influenced. 7. The increase in weight, while slow, is permanent. 8. Local lesions are influenced favorably.

LYON MEDICAL.

December 10, 1905.

1. Infection with Tuberculosis Through the Respiratory Passages and the Harmlessness of Dust, By M. CADEAC.
2. Laryngeal and Pulmonary Tuberculosis. Frequency of Parallelism in Their Development in the Same Person, By M. PIERY.

1. **Infection with Tuberculosis Through the Respiratory Passages and the Harmlessness of Dust.**—Cadeac begins his article with the statement that tuberculosis in man is considered to be a disease which results from the inhalation of tubercular dust into the respiratory passages. He then goes on to show that tubercular sputum is rendered innocuous by drying and that very movable dust is inert.

2. **Parallelism of Development of Laryngeal and Pulmonary Tuberculosis.**—Piery reports a couple of cases and concludes that when pulmonary and laryngeal tuberculosis attack the same person either simultaneously or in succession they exhibit both clinically and anatomically a characteristic parallelism in their evolution.

December 17, 1905.

1. Two Cases of Aortic Stenosis with the Maximum Murmur at the Left of the Sternum. By F. LECLERC.
2. Notes on the Use of Two Remedies, Serum Gelatine and Inhalations of Formol, By DUMAREST and BAYLE.

1. **Aortic Stenosis with the Maximum Murmur at the Left of the Sternum.**—Leclerc reports two cases of aortic stenosis in which the systolic murmur at the base of the heart was most marked at the left of the mediosternal line. The cause of this exceptional localization was, he thinks, a displacement of the heart and aorta to the left of their normal positions. The differentiation from pulmonary stenosis was made by the absence of the other symptoms of the latter lesion and by the presence of the other usual symptoms of aortic stenosis.

2. **Notes on the Use of Two Remedies.**—Dumarest and Bayle speak highly of the use of subcutaneous injections of serum gelatine in cases of hæmoptysis and claim that the discredit into which it has fallen as the results of many accidents is unmerited. They also re-

commend the use of inhalations of formol in all forms of superficial bronchial tuberculosis.

PRESSE MEDICALE.

December 9, 1905.

1. The Syndrome of Suprarenal Disease.
By LEON BERNARD.
2. Myxoedema and the Sleeping Sickness, By A. LORAND.
The Ophthalmology of Syphilis, By R. ROMME.

1. **Syndrome of Suprarenal Disease.**—Bernard divides the pathological troubles of the suprarenal gland into opposite varieties, one characterized by a condition of functional hyperactivity, the other by insufficiency, the symptoms of the former consist of headache, vertigo, tinnitus aurium, amaurosis, glaucoma, transitory aphasia, convulsions, transient hemiplegia and finally sudden death. These are manifestations of an arterial hypertension of which Vasquez has described three forms, a transitory, and oscillating or unstable, and a permanent. The characteristics of insufficiency are weakness, reduced arterial tension, white abdominal line, and various nervous and digestive troubles. Muscular paralyses, epigastric and lumbar pains, in some cases a general diffuse hyperæsthesia, are symptoms of sympathetic origin dependent on the glandular insufficiency. Encephalic symptoms, headache, delirium, convulsions in children, and finally coma, are phenomena produced by the general intoxication induced by the functional trouble. He distinguishes clinically three forms of suprarenal insufficiency, acute, subacute and chronic. The discoloration of the skin which is characteristic of Addison's disease, he ascribes to irritation of the abdominal sympathetic.

2. **Myxoedema and the Sleeping Sickness.**—Lorand discusses the resemblances between these diseases and considers it more than probable that a relationship exists between them.

December 9, 1905.

1. The Functional Examination of the Nose. Rhinometry. Olfactometry. Clinical Olfactometry,
By MARCEL LERMOYEZ.
2. Hemorrhagic Infection of the Small Intestine from Thrombophlebitis of the Mesentery,
By ALBERT MONCHET.

December 13, 1905.

1. Examination of the Apex of the Lung,
By MAURICE LETULLE.
2. Infection of the Liver from Above,
By RIBADEAU-DUMAS and HALBRON.
3. The Part of the Colibacillus in the Protection of the Intestine,
By R. ROMME.

1. **Examination of the Apex of the Lung.**—Letulle's article on this subject has already been continued through two previous numbers of the *Presse* and is not only elaborate but exhaustive. In this number he deals with the transsonance and auscultation of the apex of the lung.

2. **Infection of the Liver from Above.**—Ribadeau-Dumas and Halbron report a case of right sided empyema in a tuberculous girl, in which an infection of the liver was found on autopsy to have been produced.

3. **The Colibacillus in the Protection of the Intestine.**—Romme recapitulates the article of Conradi and Kurpuweit and uses the facts and ideas thus obtained to answer the recent question of Pinna as to the utility of the constant existence of colibacilli in the human intestine. The answer is that they serve important purposes in the protection of the intestine.

December 14, 1905.

1. Faulty Urinary Elimination of the Chlorides a Factor in Obesity,
By HENRI LABBE AND LOUIS FURET.
2. Endemic Index of Malaria,
By H. GROS.
3. Treatment of Obstinate Neuralgia by Deep Injections of Alcohol,
By OSTWALT.

1. **Faulty Urinary Elimination of the Chlorides a Factor in Obesity.**—Labbe and Furet find that the regular and constant retention of a certain quantity of the salt ingested with the food is an important factor in the production of obesity, and that there is no constant relation between the quantity of water and the amount of chlorides eliminated in the obese. The treatment of obesity indicated by these facts is a restriction of the alimentary chlorides.

2. **Endemic Index of Malaria.**—Gros takes the number of cases in which the parasites are found to be present together with the number of cases in which there is a hypertrophy of the spleen to form the numerator of a fraction of which the total number of patients examined forms the denominator and obtains the percentage. This percentage constitutes the endemic index.

3. **Treatment of Obstinate Neuralgia by Deep Injections of Alcohol.**—Ostwalt injects from one to one and a half c.cm. of 80 per cent. alcohol, with a little cocaine or stovaine added, down upon the trunk of each branch of the nerve affected in facial neuralgia. His results have been good and he says that he has not met with the slightest accident in the performance of more than 250 such deep injections in cases of tic douloureux.

December 20, 1905.

1. "Chewing" in the Treatment of Hyperchlorhydria of the Stomach,
By LEON MEUNIER.
2. Examination of the Apex of the Lung,
By MAURICE LETULLE.

1. **"Chewing" in the Treatment of Hyperchlorhydria.**—Meunier found while travelling in this country that the people of the United States are greatly addicted to chewing, the vulgar chew of tobacco being replaced in the more elegant by chewing gum. He says: "If we ask these chewers, and they are legion, perhaps one man in two and one woman in four, why they chew they reply that they have found this exercise after each meal facilitates their digestion." In the East the betel nut and in Europe tobacco is similarly used. He then discusses the digestion of the usual material used as food and concludes that chewers employ empirically a true therapeutical aid to that process by augmenting the salivary secretion and that in hyperchlorhydria, in which the digestion of starch is imperfect, the assistance thus obtained is valuable.

2. **Examination of the Apex of the Lung.**—Letulle continues his elaborate article on this subject dealing in this number with the lateral and posterior auscultation of the apex and the practical indications to be obtained from examination of the auscultatory signs.

SEMAINE MEDICALE.

December 6, 1905.

Enterogenous Cyanosis, By L. CHEINISSE.
Enterogenous Cyanosis.—Cheinisse calls attention to the known fact that cyanosis of intestinal origin is essentially different from that met with in pathological conditions of the heart and lungs in that it is toxic. It is produced by the entrance into the circulation of a poison which changes the oxyhæmoglobin of the blood into methæmoglobin. The author presents a fair résumé of the literature on the subject.

December 13, 1905.

Hysterical Blindness, By Professor DIEULAFOY.

Hysterical Blindness.—Dieulafoy presents a lecture on this subject in which he relates and refers to several cases, gives a fairly extensive view of the literature, and discusses its symptomatology at some length.

December 20, 1905.

The Causes of Complete Paralysis of the Inferior or Recurrent Laryngeal Nerve, By Dr. EUGENE FELIX.

Causes of Paralysis of the Recurrent Laryngeal Nerve.—Felix discusses the various and diverse causes which may produce paralysis of this nerve. They include exudative pericarditis, aneurysms of the great

arteries in the thorax, mitral stenosis, pleurisy, pulmonary tuberculosis, tumors of the mediastinum, hypertrophy of mediastinal glands, cancer of the œsophagus, lead poisoning, arsenic poisoning, the puerperal state by means of auto-intoxication, typhoid fever, diphtheria, influenza, rheumatism, tabes, syringomyelia, and cerebral lesions which involve the centre of the nerve.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT.

December 13, 1905.

1. Röntgen Leucotoxines in the Blood in Lymphatic Leucæmia. By H. CURSCHMANN and OTTO GAUPE.
2. Sahli's Desmoid Reaction, By A. KÜHN.
3. Secondary Ovarian Tumors, By J. A. AMANN.
4. Treatment of Inflammatory Disease of the Appendages, By STEFFECK.
5. Gaertner's Tonometer, By L. RAAB.
6. Acute Hæmorrhage From the Pancreas, By TOMASCHNY.
7. Subcutaneous Use of Iodipin, By E. TOMASCZEWSKI.
8. Statistics of Cancer, By W. WEINBERG.
9. Mental Disturbances Immediately Following Concussion of the Brain, By K. HEILBRONNER.
10. Surgery of the Heart and Pericardium, By H. LINDNER.

1. **Lymphatic Leucæmia.**—Curschmann and Gaupp show that the Röntgen rays are capable of not only destroying leucocytes in the blood of leucæmic persons, but they evoke also a specific leucotoxine which can destroy normal human leucocytes in the test tube and the white cells of living animals in the circulation. If the leucotoxine is warmed to 60° C., it becomes inactive and loses its influence upon the circulating blood of animals entirely and in great part upon human blood *in vitro*. The injection of leucotoxine in the serum of leucæmic persons acts in general like the injection of foreign serum or albumin, causing an immediate leucopenia lasting from one to one and a half hours. This is followed by a return to the normal or even by a hyperleucocytosis.

2. **Sahli's Desmoid Reaction.**—Kühn is enthusiastic about this method of determining the functional activity of the stomach, especially the determination of hydrochloric acid. The reaction was described in the *New York Medical Journal*, December 23, 1905.

3. **Secondary Ovarian Tumors.**—Amann discusses three varieties of secondary carcinoma of the ovary: 1. Oedematous fibroids with epithelial deposits (carcinomatous or oedematous). 2. The nodula form of cancer. 3. Cysts with partial fibrocarcinomatous deposits. He says that the large size of the ovarian tumor in comparison with the small size of gastric and intestinal cancer, has led some authors to believe that the latter are usually secondary; but Amann points out the stomach is practically never the seat of a metastasis in cases of cancer of the ovary. The ovary becomes involved secondarily by deposits of particles of cancer cells on its surface from the intestine and stomach. The author urges a careful examination—chemically and by palpation—of the stomach in every case of suspected malignant disease of the ovary. He also thinks it advisable to examine every part of the abdomen with great care, for the primary tumor may be so small as even then to escape attention.

4. **Diseased Appendages.**—Steffeck believes some cases of tubal disease can be cured by rest in bed and hot air treatment. If this conservative treatment is not curative, operation must be resorted to. In young women with pus tubes only, in whom the ovaries are not involved, he prefers a vaginal incision so as to retain the menstruation. In chronic cases which resist conservative treatment, he removes the tubes and ovaries through an anterior vaginal incision which he highly praises as a method of operation. It may be necessary, however, to remove uterus, tubes and ovaries, in cases in which the uterus is diseased as well as the appendages.

ZENTRALBLATT FUER GYNAEKOLOGIE

December 9, 1905.

1. A Case of Criminal Abortion, By A. SCHÖNBEK.
2. Twin Placenta with One Amniotic Cavity, By W. PFEILSTICKER.
3. A Rare Case of Sarcoma of the Uterus, By T. VON WENZEL.

1. **Criminal Abortion.**—Schönbek reports the case of a woman who died of a suppurative peritonitis due to a bougie which had completely perforated the uterus after its introduction for the induction of abortion.

2. **Uterine Sarcoma.**—Von Wenzel describes an unusual uterine tumor which proved to be a sarcoma. He concludes: 1. Sarcomata of the uterus are rare growths; 2, this tumor involved the cervix only and did not invade the rest of the uterus; 3, the tumor arose from the wall of the uterus, not from its mucosa; 4, it originated as a primary growth in the uterine wall and was not the result of a degenerated fibroma or myoma; 5, it was of the small round cell variety of sarcoma which is relatively rarer than the large round cell type.

December 16, 1905.

1. Ætiology of Paralysis of the Uterus, By R. KOSSMANN.
2. Ætiology of Garrulitas Vulvæ (Flatus Vaginalis), By F. KOSMINSKI.

1. **Ætiology of Uterine Paralysis.**—Kossmann, in a polemic article, proves that sudden relaxation of the uterus, sometimes called "uterine paralysis," is due to an irritation. He gives three good reasons for his belief: 1. The fact that other smooth muscle fibres, such as those of the intestines and the ureters, do not lose their tone even in deep anæsthesia. 2. The fact that in laparatomies done under anæsthesia, "total paralysis" of the uterus is never seen. 3. The fact that the uterus contracts well after expression of the placenta when this is done in narcosis.

2. **Garrulitas Vulvæ.**—Kosminski has carefully studied several cases coming under his own observation. He is convinced that the affection does not arise from the formation of gases in the vagina, but from the fact that in all the cases the vagina is expanded by air which is expelled upon a change in the posture increasing the intraabdominal pressure. Entrance of the air to the vagina is gained when the introitus is not intact, or when the perinæum is extensively lacerated. It is true, air can escape from the vagina in cases in which fermentation is going on in the canal, but it is then of secondary importance. Instances in which intestinal gases escape through the vagina should be described as vaginorectal fistulæ.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE

1. The Influence of the Nervous System upon Cutaneous and Intestinal Absorption. By CARLO CESARINI.
2. Dystrophies and Trophoneuroses.
3. New Researches on the Morphology of the Elements of Blood.

3. **New Observations on the Shape of the Red Cells.**—Triola, of Tunis, was not satisfied that the red blood cells are really discoid in shape, and believed that this alleged shape was an artefact, produced upon their contact with air, or by changes of pressure. Even the studies of circulating blood *in vivo*, as in the capillaries of a mesentery studied in a living animal, he thought, were deficient in technique. He therefore used the following method of observation: He curarized a guinea pig a few days old, fixed the animal on a special table, opened the abdomen, and isolated a portion of the mesentery. The loop of intestine was so fixed that the mesentery was in a plane superior to that of the orifice of the table, and that nothing was in contact beneath in the mesentery. Above the mesen-

tery no cover glass was used but the objective of the microscope was lowered on it with a drop of vaseline oil interposed. The immersion lens was used. The blood current was too fast in some vessels to allow accurate observation, but in the vessels nearest the intestine in which the current was arrested, the red cells were seen arranged "in mosaic form" or in heaps "like piles of cheeses." They were white in the capillaries and became reddish in the larger vessels. They were never arranged in rolls like coins and never showed any discoid forms or depressions in the centre. Finally, in vessels in which the current was very slow the mode of progression of the red cells was observed. Here, they were found to fill the entire lumen of the capillary, from one wall to the other, and moved either straight on, showing always the same surface, or else rotated on their axes, showing a different surface every fraction of a second. Every surface was rounded and no depressions were noted. This shows that Malpighi in 1661 was right, when he said that red blood cells in the circulating blood were spherical in shape. Further examinations of blood were made by the author on slides using what he terms "the lubrication method." He lubricated the interior of an aspirating syringe with oil of vaseline, and drew a small quantity of blood from an artery or directly from the heart of an animal. He placed a drop of vaseline oil on the centre of a slide and into the centre of this drop placed some of the blood thus aspirated. On examining the contents of this drop, he found red blood cells white in color and spherical in shape.

December 10, 1905.

1. Contribution to the Study of Cheyne-Stokes Breathing, By G. CURLO.
2. Acute Articular Pseudorheumatism in a Hysterical Subject, By C. P. GOGGIA.
3. Researches Upon the Hæmolytic Power of the Serum of Syphilitics After Mercurial Treatment, and Upon the Resistance of Their Blood Cells Against Heterogenous Serums, By M. PERGOLA.
4. Hypodermic Injections of Quinine in Tetanus, By G. GRIXONI.

1. Cheyne-Stokes Breathing.—Curlo considers Cheyne-Stokes breathing as the result of a diminished reflex excitability of the centres, which still maintain their automatic excitability. Under normal conditions the carbonic acid produces a sufficient stimulus to keep the reflex excitability continuously active. When the centres are affected through circulatory lesions, or through intoxication, the reflex excitability diminishes and the normal amount of carbonic acid is no longer capable of maintaining the reflex action. External stimuli and the patient's will are capable of interrupting the phenomenon of reflex excitability for a limited time, but this does not disprove the theory that carbonic acid constitutes the physiological stimulus which keeps the reflex action going.

RIFORMA MEDICA.

December 2, 1905.

1. The Action of the Röntgen Rays Upon the Virus of Rabies, By ALFONSO CALABRESE.
2. The treatment of Anæmia by Means of Antibodies, By GINO NORSA.
3. Clinical Contribution to the Treatment of Cholecystolithiasis, By ORESTE CIGNOZZI.
4. Cathelin's Method of Treatment in Essential Incontinence of Urine, By C. BRUNI.

1. Roentgen Rays in Rabies.—Calabrese concludes from experiments upon inoculated rabbits, that the Röntgen rays have no effect upon the virus of this disease, and that there is no hope for the x rays as a means of treating hydrophobia.

2. Antibodies as a Means of Treating Anaemia.—Norsa presents an interesting study of the treatment of anæmias by means of alleged specific serums. In 1900 Lucatello, believing that anæmia was due to a

toxic condition of the blood, and that antitoxic substances injected into the circulation would cure it, prepared serums by injecting dogs with the serum of patients with different forms of anæmia. The serums thus prepared were used for treating patients with corresponding varieties of anæmia. The present author gives the results of similar investigations, employing rabbits and dogs for this purpose. He reports two cases in detail giving the method of procedure. The conclusion which he was forced to make from his work was, that antibodies prepared in the manner mentioned could not be employed in the treatment of anæmias. The effect of these injections was to drive existing red cells into the circulation, rather than to generate new and healthy cells. The amount of hæmoglobin, also, could not be materially increased by means of the serums.

3. Surgical Treatment of Gallstones.—Cignozzi reports ten cases of gallstone disease operated upon by him during the past two years, and emphasizes the good results that can be obtained with surgical treatment in conditions that, but for timely interference, would have serious, if not fatal results. He presents a fairly complete bibliography of the subject for the past ten years.

4. Cathelin's Method (Epidural Injections) in the Treatment of Incontinence of Urine.—Bruni deals with the now well known method of Cathelin for treating "idiopathic" incontinence of the urine. He followed Cathelin's technique, injecting a physiological salt solution with the addition of one gramme of cocaine per one hundred c. c. of the liquid, later substituting the new anæsthetic, stovaine, in the same proportion. He treated in all, 23 children with enuresis. Of these, seven were cured after one or two injections; ten were markedly improved and may be cured ultimately, while ten were adolescents, in whom the results of the treatment were negative. He also succeeded in greatly benefiting some cases of spermatorrhœa, and of painful cystitis, by means of these epidural injections.

December 9, 1905.

1. Quantitative Determination of Hydrochloric Acid in the Gastric Juice by Petteruti's Method, By STEFANO BARBA.
2. Biliary Cirrhosis, and Its Surgical Treatment (*To be continued*), By ORESTE CIGNOZZI.
3. A Mixed Congenital Tumor of the Tongue, By SILVIO ROLANDO.
4. A Case of Trigeminal Neuralgia Cured by Means of the Röntgen Rays, By A. GRAMEGNA.

1. Petteruti's Method of Estimating Hydrochloric Acid in the Stomach.—Barba finds that all the methods hitherto recommended for the determination of the hydrochloric acid in the gastric juice are complicated and inaccurate, and are in other ways unsatisfactory. He recommends Petteruti's method, which, while also approximate, is much simpler and takes but little time. The principle of Petteruti's method is as follows: A test meal is given consisting of 300 c. c. of beef broth and two whites of egg is given, 250 c. c. of the mixture being measured and administered. An hour later the required amount of gastric contents are aspirated. A sample of the albuminous solution used for the test meal, measuring 5 c. c. is then tritated with a solution of hydrochloric acid, 2:1000. This is added drop by drop, testing the solution with congo paper until we find the number of c. c. required to saturate the albuminous bodies in the solution. (The author modified the test meal, using a solution of commercial albumin of a known strength.) As the amount of hydrochloric acid used to saturate a solution of proteids is always the same for the same solution, we can find out the amount of hydrochloric acid secreted by the stomach during the hour of testing by simply subtracting from the sum just obtained in the titration, the number of c. c. of the same solution of hydrochloric acid that

have to be added to a sample of the gastric contents of the patient after the test meal, in order to saturate this sample. The first figure, i. e., the titration figure of the test meal before introduction into the stomach, is known as *N*, while the second figure after an hour's digestion is known as *n*. Then *x*, the number of c. c. of hydrochloric acid solution secreted in one hour by the stomach equals *N*—*n*. If this difference be divided by ten we get the amount of hydrochloric acid expressed in c. c., secreted during the hour. One of the important points developing in the author's work was the fact that the amount of hydrochloric acid found after a test meal was greatly influenced by mastication. This is eliminated in a liquid test meal such as Petteruti uses.

ROUSSKY VRATCH.

November 19, 1905.

1. In Memory of I. M. Setchenoff, By N. E. VVEDENSKY.
2. Origin of the Aorta and of the Narrowed Pulmonary Artery from the Right Ventricle, Near an Orifice at the Base of the Interventricular Septum, in a Girl Aged Three Years, By N. A. BATOUYEFF.
3. The Depressive Forms of Mental Disease in Soldiers, By S. A. SOULIANOFF.
4. Artificial Atheroma of the Aorta in Rabbits Produced by the Injection of Adrenalin, Digalin, Strophanthin, and Adonidin, By Z. F. ORLOWSKI.

1. **The Physiologist Setchenoff.**—Vvedensky gives an appreciation of the life and work of Setchenoff, who died on November 3rd, in Moscow. He was born in 1829, and studied engineering in St. Petersburg. In 1847 he was appointed an officer in the army, but owing to his liberal views was obliged to leave the service in 1850, and entered the medical faculty of the University of Moscow. Graduating in 1856, he went to Berlin, where he studied with Hoppe-Seyler, and with DuBois-Raymond; in Vienna under Ludwig, and in Heidelberg under Helmholtz. In 1860 he was appointed adjunct professor in the Medical Academy at St. Petersburg, and began his experimental studies. In 1870 he was appointed professor of physiology at the University of Odessa, and in 1875 was transferred to the corresponding chair in St. Petersburg. He resigned in 1888 and passed the last years of his life in Moscow, where he worked in the physiological institute until a few years ago. The first work of Setchenoff was on the gases of the blood, a subject which formed an important part of his studies during the years 1879-1890. His most important contributions to science were in the field of physiology of the nerve centres, including his discovery of the specific inhibitory centre of reflex action, situated in the middle portion of the brain and known as the "centre of Setchenoff." A wide range of subjects was covered in his other experimental labors, such as, for example, the digestion action of trypsin, the circulation of the kidney, etc. He translated a number of textbooks into Russian, including those of Burton-Sanderson, and Foster, and edited editions of Darwin's and Taine's works. By means of public lectures, he sought to popularize science among a wide circle of auditors and probably has done more than any one else in this direction, so far as popular knowledge of physiology in Russia is concerned.

4. **Artificial Atheroma of the Aorta.**—Orlofski found, upon injecting a variety of substances into the rabbits, that there is no specific form of atheroma that can be produced by any one substance, but that the changes induced by the injection of adrenalin, digalin, strophanthin, and adonidin were identical under the microscope. The author believes that the atheroma in these experiments was partly due to the toxic elements of the drugs, and partly due to their action on the vaso vasorum which interferes with the nutrition of the walls of the artery.

November 26, 1905.

1. The Treatment of Tumors of the Bladder (*To be concluded*), By N. F. LESHNIEFF.

2. The Question of Intermittent Albuminuria due to Cold (*To be continued*), By A. V. KHOROSCHILOFF.
3. The Methodical Feeding of Infants with Goats' and Cow's Milk in the "Drop of Milk" Institutions, By V. O. HUBERT.
4. The Need of Special Wards for Nervous and Mental Diseases in Military Hospitals, By M. O. SCHAIKEVITCH.

3. **Cow's and Goat's Milk in Public Infant Milk Depots.**—Hubert presents the results of his experience in artificial infant feeding for the past twenty years. He concludes that the most important factor in the diminution of infant mortality from artificial food is the public or municipal infant milk depot known in many parts of Europe (especially in France and Spain) under the name of "The Drop of Milk." In St. Petersburg the first depot of this kind was established in 1901, and is a dispensary where infants receive properly prepared artificial food, and mothers receive instruction in feeding and hygiene of babies. A smaller institution was recently established in connection with the work of the Public Health Society. The author believes that raw cow's milk and goat's milk is the best substitute for mother's milk, and warns against the use of artificial infant's foods before the sixth month. Sterilization of milk results in anæmia and rickets in the infants fed with this product. The best diluent for raw cow's or goat's milk is a six per cent. sterilized sugar solution. If indigestion is present, whey is an excellent diluent. The care of the cow and the cleanliness of the farm, and of all the means of transporting milk are essential factors in keeping the milk free from pathogenic germs. Goat's milk may be used raw and gives excellent results, provided the animal be well cared for and kept in the house. Alpine goats are well adapted for this purpose, as they do not have any disagreeable odor and their milk has no offensive taste. Domestic goats are worthless, however. Alpine goats are easily trained, and can be kept as substitutes for wet nurses, especially in public infant milk depôts.

ANNALS OF SURGERY.

November, 1905.

1. A Review of Five Hundred Cases of Gastroenterostomy, Including Pyloroplasty, Gastroduodenostomy, and Gastrojejunostomy, By W. J. MAYO.
2. Splenectomy for Myelogenous Leucæmia, By M. H. RICHARDSON.
3. On Rupture of Intestine, By R. P. CAMPBELL.
4. The Management of Certain Critical Cases of Intestinal Obstruction, with Report of Cases, By J. W. ELLIOT.
5. Angulation at the Sigmoid, By H. B. DELATOUR.
6. Mesocolic Hernia, By J. F. DOBSON.
7. Lymphatic and Hepatic Infections Secondary to Appendicitis, By J. C. MONRO.
8. Parotitis Following Appendectomy, By E. BOWE.
9. Acute Gangrenous Appendicitis in Typhoid Fever Simulating Perforation, By J. H. JOPSON.
10. Jaboulay's Anastomatic Button, By E. BEER.
11. Tubercular Peritonitis in Woman, By H. O. MARCY.
12. Fracture of a Phalanx Near the Epiphysis, By J. A. WYETH.
13. As to the Necessity of Consent to Render Surgical Operations Lawful, By J. F. SHIELDS.

1. **Gastroenterostomy.**—Mayo dwells particularly upon gastrojejunostomy, 421 of the 500 gastroenterostomies being of this variety. He recapitulates as follows: 1. The gastric opening should be on the posterior wall, obliquely from above downward, and from left to right. 2. The lowest point should be at the lowest point of the stomach, on a plane perpendicular with the cardiac orifice. 3. To insure this effect the gastric incision should extend one fourth to one half an inch upon the anterior wall. 4. The incision in the intestine should be longitudinal, opposite the mesentery, and begin from one to three inches from the origin of the jejunum, measuring on the anterior surface.

4. **Critical Cases of Intestinal Obstruction.**—Elliot

summarizes his observations as follows: 1. The prevalent method of enterectomy with immediate suture in cases of intestinal obstruction is attended with high mortality, which is due to the changed condition of the distended bowel. 2. Enterostomy with later enterectomy is to be reserved for cases which are unable to bear primary enterostomy. 3. Enterectomy with a temporary artificial anus should be the operation of choice in all critical cases of intestinal obstruction where there is an opportunity for resection, whether it involves the large or the small intestine. 4. The following improvements in technique are suggested: (a) The upper distended bowel should not be opened until the peritoneal cavity is completely closed. (b) The open ends of the bowel should be stitched together on their mesenteric side before they are fastened into the parietal wound. This will facilitate the subsequent closure of the artificial anus. (c) If the artificial anus is in the small intestine the partially digested discharge from the upper opening should be collected and injected into the efferent opening. 5. The closure of the artificial anus is a safe operation and hardly disturbs the convalescence.

5. Angulation at the Sigmoid.—Delaour observes that in this condition nothing can be felt per rectum but the pressure of distended intestine above the pelvis. The rectum is empty, usually not dilated, and no discharge follows the withdrawal of the finger. Patients with this lesion show neither emaciation nor change in general health. The symptoms may come either slowly or suddenly. In treating such cases cathartics are not advisable until there is evidence of fecal matter in the stools. Castor oil is then the least objectionable cathartic. Rectal injections, with the patient in the knee chest position, may be tried, but if unsuccessful the cæcum may be used for an artificial anus. This may be done under local or general anæsthesia. After two or three months this artificial opening can usually be closed.

7. Lymphatic and Hepatic Infections.—Monro concludes this paper as follows: 1. Lymphatic and hepatic infections are not uncommon conditions, and are frequently associated, one type may be the source of the other. 2. In certain cases of hepatic abscess the source of infection cannot be determined either clinically or by an operation. 3. The type of infection does not depend upon the gravity of the originating appendicitis. 4. Subphrenic infections must not be isolated in a class by themselves, as they depend on both lymphatic and hepatic infections, and vice versa. 5. Hepatic infections are not uniformly distributed even when originating in the portal tract, the left lobe being solely affected in some cases. 6. The prognosis of lymphatic infections is better than that of hepatic, but if the hepatic are secondary to lymphatic or direct mechanical invasion the outlook will be more favorable than in true portal invasions. 8. Early removal of an inflamed appendix may abort a secondary infection of the types considered in this paper.

10. Jaboulay's Anastomatic Button.—Beer states that the advantages of this button are that it may be attached directly and quickly to the bowel, through a very small incision. It will not displace the methods of anastomosis by suture and by the Murphy button. In cases of advanced carcinoma, especially in very feeble subjects of gastric cancer, the saving of time by this button may prolong life and the fact that it may not be passed is of little consequence.

11. Tubercular Peritonitis in Woman.—Marcy observes that inasmuch as infection of the peritonæum has its invasion chiefly through the reproductive organs, an additional reason is apparent for maintaining the pelvic structures of women in a normal condition. A lacerated cervix, a chronic endometritis, or a diseased Fallopian tube may facilitate bacillary infection. The

disease having been established and the diagnosis determined, operative intervention is to be recommended, even in advanced cases. Inferential deductions as to the value of operative interference are based upon the removal of the ascitic fluid, and the stimulating effect of exposure of the peritoneal surface to the air, the mechanical irritation of sponging, and the chemical effect of mercurial solutions, iodoform, etc. All such measures increase the leucocytes, upon which the destruction of the bacteria and the resulting cure probably depend.

13. As to the Necessity of Consent to Render Surgical Operations Lawful.—Shields summarizes his views in the following statements: The consent of an adult patient in good mental health is sufficient to relieve the surgeon of liability in all classes of cases. In the case of lunatics the surgeon should have a patient declared lunatic, if time permits, and have the consent of those who are legally in charge. If urgency does not permit such delay the consent of those who are in control of the lunatic and of the lunatic himself, if possible, should be obtained. In all cases of sudden and critical emergency the law will imply consent or justify the surgeon's act by implied license. This is true both as to adults and minors. In the case of minor children the consent of both parent and child should be secured if possible to protect the surgeon against litigation. Under the age of fourteen years the parents' consent is necessary to protect the surgeon against litigation and error of judgment. Above the age of fourteen the consent of the child, in serious cases, is sufficient.

Letters to the Editor.

PHYSICIANS AND THEIR FAMILIES AS PATIENTS.

428 FORTY-SEVENTH STREET,
BROOKLYN, N. Y., January 2, 1906.

To the Editors,

After reading the editorial entitled Physicians and their Families as Patients, in the current number of the *New York Medical Journal* one naturally consults the column devoted to the notices of deaths, with the following result: Names of twelve physicians mentioned with ages at death. The average age of these twelve physicians is sixty-three years and seven months. The youngest at death was thirty-six years old; the oldest was ninety-eight years. Two of the twelve lived to be over ninety, four over eighty, and six over seventy.

Anyone who scrutinizes these death notices from time to time will quite often find the names of physicians who have attained great ages. There is undoubtedly a great deal of truth in the editorial referred to, but one is inclined to believe also that the average physician takes pretty good care of himself as well as his patients.

ROBERT E. COUGHLIN.

Infection of Syphilis Through a Toothbrush.—M. Foveau, of Courmelles, communicated to M. Fournier, of the French Academy of Medicine, the following history of a sad case of syphilis: A married man suffers from a mild form of syphilis, and infects his anæmic wife, who becomes a sufferer from a severe secondary syphilis. The sister of this woman comes to live with the married couple; she has a nursing baby. This sister places her toothbrush in the same glass which is used by the syphilitic woman, and has some of her teeth extracted. She is infected with syphilis and gives the disease to her baby.—*Revue de Stomatologie*, December, 1905.)

Proceedings of Societies.

AMERICAN SOCIETY OF TROPICAL MEDICINE.

Meeting of December 8, 1905, held in Philadelphia.

Mosquito Work in Relation to Yellow Fever on the Isthmus of Panama.—Colonel WILLIAM C. GORGAS, of the army, in charge of the sanitation of the Canal Zone, delivered the address of the evening. He spoke more particularly with reference to yellow fever and malarial fever, which two diseases had caused the principal mortality during the building of the railroad and in the attempted construction of the canal by the French. The conditions were much the same as had been encountered in Cuba, except that in Panama mosquitoes bred as readily in January as in July. During the French occupancy the heavy mortality was a potent factor in the failure of the canal work. From his investigations he believed that the French statistics represented not more than half the actual mortality. Under the United States government authority for doing sanitary work was granted in February, 1905. All cases of yellow fever were required to be reported to the American health authorities, and in addition all cases of fever of any kind occurring in an American were required to be reported. Cases were, therefore, received within the first day or two of the disease. The general mortality was about twenty-five per cent. of all cases, but the mortality of Americans treated in the hospitals was not more than ten per cent. The suspected patient was placed in a thoroughly screened ward. In the yellow fever wards the additional precaution was taken of putting each new patient in a wire cage just large enough to cover his bed, where he was kept until the infectious period of the disease had been passed. Also these wards were fumigated every two weeks, so that if a mosquito should get in and bite a patient, she would not have time to become herself infected. The house from which the patient was removed and the contiguous houses were fumigated.

The stegomyia is described as a domestic mosquito, generally not leaving the house where she was hatched, and scarcely the room in which she had lived. The fumigating squads were said to be composed of an experienced foreman and twenty men, and the material generally used was sulphur, although in many stores and the better class of residences many articles were ruined by its employment. Persian insect powder, pyrethrum, was sometimes substituted for sulphur. If a patient elected to be treated at home, the central office was informed, and the patient was thoroughly protected by screens. Only one exit was left to the room, and a guard was stationed there, who kept the key and allowed only those to pass in and out who were authorized by the doctor. Fumigation of the rest of the house was carried out and the screened room fumigated when the case had terminated. The stegomyia bred principally in clean rain water, and in Panama the people had depended largely upon rain water for domestic purposes. All receptacles for the water were, therefore, covered and an inspector appointed for each district, concerning the conditions of which he was obliged to report at least twice a week. At the time of the first inspection, about the 1st of March, 4,000 breeding places were reported; in October, about the time that Colonel Gorgas left Panama, there were fewer than 400. In the city of Panama it was estimated that ninety per cent. of the mosquitoes were stegomyia, while in Havana they constituted only five per cent. of the mosquitoes. The results of the work were seen in the apparent elimination of yellow fever. In June on the zone there were sixty-seven cases, in July forty odd, in August about twenty-seven, in September about seven, in October three, none in

November; none so far as observed in December. In the town of Colon the last case occurred on July 23rd. Colonel Gorgas believed, however, that it was necessary to allow at least two months to pass without a case before it could be said with certainty that yellow fever had been eliminated.

Detailed descriptions of the measures against malaria were not given, but they were the same as those carried out in Havana and now used in the United States generally, principally superficial ditching. The results had been satisfactory. He thought it safe to say that the canal was being dug with as little trouble from sickness as would obtain in a similar project between Philadelphia and Baltimore, and he believed that further improvement could yet be secured.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

SECTION A.

Fifty-fifth Annual Meeting, held in Scranton, September 26, 27, and 28, 1905.

The First Vice-president, Dr. E. V. SWING, of Coatesville, in the chair.

(Continued from vol. lxxxii, page 933.)

The Address in Hygiene and State Medicine.—Dr. G. W. WAGONER, of Johnstown, in this address, said that he believed that sanitary work, to be effective, must be backed up by an authority either assumed or delegated; the people must believe that it was necessary and have faith in the competency of those undertaking the work. The value of sanitary knowledge to a community was remarkably demonstrated at the time of the Johnstown flood in the work of the State Board of Health. Dr. Wagoner questioned whether the law "creating a department of health and defining its powers and duties," passed by the Pennsylvania legislature, was consistent in all its features. By this law the office of the commissioner of health was created with unlimited powers. Dr. Wagoner believed that much good might come out of the law if the physician would stand between its rigors and the public as an adviser, as a mediator, as a friend to explain, and as an instructor of the people in the scientific application of sanitary laws.

Protective Inoculations Against Typhoid Fever.—Dr. D. M. BERGEY, of Philadelphia, said in this paper that the value of protective inoculations could be determined only by carefully following out the health of the inoculated as compared with the health of uninoculated persons living under the same conditions. It was observed that the reduction in the incidence of typhoid fever among those inoculated by the Wright method varied greatly in different troops, and also in regard to the number of injections made. In some instances the incidence was reduced one half, while in others there was "a reduction varying from a 6-fold to a 28-fold reduction." The case mortality among the inoculated as compared with the uninoculated had been reduced more than fifty per cent. Dr. Bergey believed that the method possessed value, but that there should be no less energy exercised in the eradication of all known sources of infection by the well established means.

Pain of Obscure Origin Simulating Neuritis, Neuralgia, or Organic Lesions.—Dr. JOHN H. MUSSER, of Philadelphia, described cases illustrative of the title of his paper, and asserted that in the elucidation of such cases thorough study should be made of the nerve itself, and especially of the spinal cord, the sensory and motor phenomena, and the reflexes of all kinds. In connection with a consideration of possible lesions along the course of the nerve trunk the anatomical conditions must be recognized; bony, vascular, and muscular lesions must be considered before a definite diagnosis could be established. The general phenomena attendant upon the case should be studied, and too much reliance

should not be placed upon sedative drugs. Dr. Musser was so thoroughly convinced of the frequent surgical source of pain that, generally speaking, he preferred to resort to the knife, even though he sometimes did it erroneously, rather than to the hypodermic needle.

Malignant Lymphoma, and a Brief Consideration of Splenic Anaemia.—Dr. J. A. LICHTY, of Pittsburgh, reported the case of a patient, aged sixty-seven, who had been sick two years. There was enlargement of the spleen, which was primary, with absence of leucocytosis, gradual decrease of leucocytes, anaemia, a comparatively large number of erythrocytes, the presence of pigmentation and of subcutaneous hæmorrhages, and absence of enlargement of the lymphatic glands, without a history of malaria, leucæmia, syphilis, or cirrhosis of the liver. In the course of the disease there occurred enlargement of the liver and ascites. A diagnosis of splenic anaemia was made. At the autopsy there was found a great infiltration of lymphoid cells in the liver and the spleen, and the lymph glands about the cæliac axis were enlarged. He concluded that the diagnosis of splenic anaemia should be made with great reservation, and that it was more than likely that at present it was made too often.

Dr. PHILIP Y. EISENBERG, of Norristown, said that he regarded the case as one of those blood diseases whose ætiology was not understood, whose prognosis was well understood to proceed to a fatal termination, and whose treatment was very uncertain.

Chronic Rheumatism.—Dr. CHARLES W. PAINTER, of Boston, in this paper took for the basis of the classification of the chronic rheumatism a study of the ætiology, clinical course, phenomena, and pathology of the disease. He made a plea for the united work of the clinician and pathologist. The following three groups of chronic rheumatism were outlined: 1. Those associated with some infective organism, in which the joint manifestations were more or less rapid in their development, acute in character, and accompanied by constitutional symptoms characteristic of an infection. 2. The atrophic cases, so called because of physical characteristics. Those cases were not inflammatory either in onset or in progress, and apparently were associated with some disturbance in the metabolism of the body. This type was more common in women and in young adult life, and was very frequently associated with nervous shocks and mental worries. Pathologically, the lesions were in the cartilage and bone as well as in the soft parts, which differed from lesions in the infectious type. 3. The third group was termed hypertrophic because of the physical characteristics. To this group belonged Heberden's nodes, morbus coxæ senilis, and other lesions of the same character occurring in the spine, the knee, the elbow, etc., for which there were no specific names. These lesions were said to be characterized by an hypertrophy of cartilage about the joint lines and subsequently a true bone formation which was permanent and gave rise to mechanical disturbance more than to constitutional disability.

Dr. Painter did not maintain that this was an entirely satisfactory method of classification, but that it was a working hypothesis and would lift from the profession the necessity of indiscriminately prescribing the salicylates for the interior and oil of wintergreen for the exterior, and of telling the patient and his friends that his symptoms were the result of chronic rheumatism and that nothing could be done.

Dr. JAMES J. WALSH, of New York, thought it particularly important to emphasize the necessity for individualization and to recognize the fact that under this group of chronic rheumatism there were a number of diseases which only when separated could be benefited by medicine. Referring to occupation neuroses, Dr. Walsh asserted that there was not a single occupation in which a person executed an habitual motion

which would not cause pain around the joints associated with that motion. A change in the barometer would cause pain in a tooth if it happened to be diseased, and pain in the arm if it was overworked. This pain was not different from that called rheumatism.

Dr. DE FOREST WILLARD, of Philadelphia, thought it the bane of the medical profession to call pains rheumatism without making any diagnosis whatsoever as to the cause of the symptom. He had seen cases which had been allowed to go on to bone destruction while still treated as rheumatism.

The Diagnostic Value of Blood Cultures.—Dr. DAVID L. EDSALL, of Philadelphia, from the standpoint of the clinician, pointed out certain groups of cases in which blood cultures had been found to be of value. The cases were said to be those in which bacteria easily cultivated upon ordinary media got freely into the blood. Dr. Edsall cited a case in which an ear specialist did not think there was sufficient evidence of mastoid disease, but in which there was obtained a positive culture of a bacillus like the colon bacillus. In a series of gynecological and obstetrical cases, mentioned by courtesy of Dr. Hirst and Dr. Evans, in which Dr. Hirst had been unable to find a local source of infection, blood cultures were obtained, and an operation revealed abscess in the wall of the uterus. The method was believed by Dr. Edsall to be one of the most important means of investigation open to the profession.

Some Color Comparisons in Medicine.—Dr. HENRY E. WETHERILL, of Philadelphia, read this paper, which was based upon the results of researches made on color scales. He showed improved hæmoglobin scales called the ante mortem blood color scales. They were a practical improvement upon other hæmoglobinometers, because they gave the true proportion of hæmoglobin. Judgments of any color may be made between the 10 per cent. colors of the scale.

The Address in Neurology.—Dr. E. E. MAYER, of Pittsburgh, in this address, discussed the limitations of psychology and biology to explain clinical psychiatry. A plea was made for physicians to recognize mental diseases as a part of general medicine and to study them. He considered neurasthenia as always being a psychasthenia, and hypochondriasis as being only a symptom of psychasthenia. Dr. Mayer insisted upon betterment in the care of our insane.

Insanity in the Aged.—Dr. CHARLES W. BURR, of Philadelphia, spoke of the difficulty of determining the mental condition of the aged, because there was no dividing line between normal and pathological senility. The best rule to follow was to discover whether the man knew what he wished to do, was competent to recognize the duty he owed toward his relatives, and was not swayed by momentary passion or delusions. He also spoke of the frequency of acute insanity in old age (mania and melancholia), and stated that the outlook as to cure was almost as good as in younger people. While it was true that physical and mental old age run along together, yet the saying that "a man is as old as his arteries" was not true in every case. There were certain persons who become prematurely senile while the physical organism remained in fairly good condition. In the consideration of postparalytic insanity, he thought that it was perfectly possible for an old man after an ordinary hemiplegia to remain in fit mental condition to take care of himself, but if there was also sensory aphasia or extreme diffuse arterial disease, there would surely be more or less dementia. Occasionally apoplexies in old people were ushered in with a period of excitement.

Dr. HUGH MEREDITH, of Danville, thought that Dr. Burr's paper should be of value to the whole medical profession, particularly because the insane patient came under the observation of the physician at large long be-

fore he was seen by the alienist. If the brain failed of proper nutrition, he thought it possible for presenile conditions to exist as well as the true senile forms of mental disease.

Dr. ALFRED HAND, of Philadelphia, asked if the apprehension of loss of mind held by some aged people might not be construed as indicative that no mental failure was probable?

Dr. T. H. WEISENBERG, of Philadelphia, gave an interesting account of a patient seen with Dr. Mills in whom there began to be loss of memory with delusions, which within two months had become very marked, and the man subsequently died. At the necropsy there was found a large frontal tumor, and back of this evidence of a hæmorrhage, which had undoubtedly caused the insanity.

Dr. BURR was not inclined to think that the tumor in the case mentioned by Dr. Weisenberg had anything to do with the insanity. Answering Dr. Hand's inquiry, Dr. Burr replied that he did not know. He did know, however, that most of the healthy old people whom he knew did not worry about their mental condition.

The Recognition of Hysterical Symptoms from Organic Symptoms.—Dr. THEODORE H. WEISENBERG, of Philadelphia, reported cases showing the similarity of symptoms in hysterical and in organic disease and the consequent difficulty in diagnosis.

Report of a Case of Acute Myelitis of Toxic Origin.—Dr. HERMAN B. ALLYN, of Philadelphia, read a valuable paper with this title.

Sudden Exophthalmos and Blindness; Death; Autopsy.—Dr. EDWARD B. HECKEL, of Pittsburgh, in this paper, said that the condition was one suddenly developed in a young married woman, twenty-two years of age, whose previous history had been negative, except that upon closer examination she admitted that she had suspected herself to be pregnant and had been persuaded to take some patent preparation with the object of producing an abortion. The condition which attracted most attention was the sudden exophthalmos and blindness, which were complete within a few hours. Curettage showed no signs of pregnancy. A typical septic temperature zigzagged between 105° and 99°, taken every two hours. In addition to the exophthalmos, hæmorrhages appeared in both anterior chambers. Death occurred eight days after the appearance of the exophthalmos. At no time had the patient complained of headache until the day previous to death. Streptococci were found, but no abscess formation in any part of the body. In the left frontal lobe there was a cavity of about the size of a hen's egg, apparently filled with purulent fluid, but it was demonstrated to be a clot. There was no limiting membrane, but the cavity was studded with small millet seed granulations, so that even after the thorough autopsy a positive diagnosis was doubtful.

The Clinical Examination of the Faeces.—Dr. J. DUTTON STEELE, of Philadelphia, presented this paper. The method employed in these examinations was that of Adolph Schmidt with a few modifications. This so called functional examination of the stools had its limitations when used as a method of diagnosis, but was of very great value in following the digestibility of various food stuffs in determining the proper diet in any given case. This was shown in a case from Dr. Musser's wards in the University Hospital, when a farmer, aged twenty-three, was admitted with history of chronic diarrhœa, loss of weight, and abdominal pain. A test diet revealed hardly any power to digest muscle fibre. His gastric function was normal and the diarrhœa was apparently due to an enteritis secondary to undigested muscle proteid. Upon stopping the meat diet the diarrhœa promptly ceased. The

starches and fats of his diet were then increased until the examination of his stools showed that the limit of each had been reached. Under this treatment the symptoms of enteritis subsided and the patient gained twenty-eight pounds in a month. The method was simple and easy to carry out, and it bade fair to prove an accurate means of watching the power of the gastrointestinal tract to digest certain food, and hence to be of great use therapeutically and in a general way of considerable value diagnostically.

Dr. LIGHTY inquired whether in determining the length of time required for the food to pass through the gastrointestinal tract, there was the necessity of taking into consideration a dilated or prolapsed stomach, and, if so, how the figures would be modified. The point which most impressed him was the finding of mucus in the stools, and he thought the method should be put upon the same basis as that of gastric analysis.

Dr. STEELE replied that he could not give any data relative to the question.

Scopolamine Hydrobromide.—Dr. JOHN V. SHOE-MAKER, of Philadelphia, read a paper upon this remedy, which, he said, although it had recently attained much vogue, was not really a new remedy, as it was described in his book on *Therapeutics* ten years ago. It was, however, only introduced into the United States Pharmacopœia at the last revision, and that authority stated it to be identical with hyoscine hydrobromide and said that the average dose was $\frac{1}{120}$ of a grain. The drug was shown to be very powerful, and great caution was urged in its use, the speaker having seen marked toxic effects from a hundredth of a grain.

Diaphragmatic Hernia, with Complete Extrusion of Stomach and Spleen.—Dr. J. BRUCE MCCREARY, of Shippensburg, presented this paper, detailing the history of the case, that of a man of twenty-two, who fell in collapse after having run a foot race. His usual health was not recovered until the end of two years, when he still, however, experienced a feeling of pressure in the spleen, and chronic diarrhœa was present in varying degrees for six years. Eight years after the first injury he was thrown from a carriage and had a return of the same symptoms. Three months later he had an enormous internal hæmorrhage. For three years the hæmorrhages continued at intervals. A diagnosis of diaphragmatic hernia with partial extrusion of the stomach, dislocation of the heart, and pneumogastric fistulæ was made by Dr. McCreary and verified by autopsy. During the illness of the patient relief from the extreme pain was given for a year by stomach lavage. By keeping the stomach clean the generation of gases had been prevented.

A Case of Hæmorrhage of the Pancreas Terminating in Death in Nine Hours.—Dr. A. E. ROUSSEL, of Philadelphia, read this paper.

Section B.

The First Vice-president, Dr. ERASMUS V. SWING, of Coatesville, in the chair.

The Address in Surgery, entitled On the Value of Spinal Analgesia in Shock, was delivered by Dr. JONATHAN M. WAINWRIGHT, of Scranton (see vol. lxxxii, page 1331).

The Results of Surgical Treatment in Exophthalmic Goitre was the title of a paper read by Dr. B. FARQUHAR CURTIS, of New York, who reported two deaths and one relapse after nine months in seven cases in which he had operated by sympathectomy, with only one complete cure five years after the operation. Thyreoidectomy, he felt, was a preferable procedure, as it could be done under local anæsthesia, the scars were not so prominent, and the mortality was lower. He advised preparatory treatment by rest in bed, ice bags,

etc., preliminary ligation, and operating under local anæsthesia.

Dr. R. G. LeCONTE, of Philadelphia, urged the necessity of the early reference of these cases to the surgeon, if the best results were to be obtained. He mentioned three methods of preventing acute thyreoidism caused by absorption of increased secretion from the gland: 1. Before operation, by means of sclerosing the gland by the x ray. 2. During the operation, by means of intravenous injections of salt solution or hypodermoclysis. 3. After operation by free drainage.

The Focal Diagnosis of "Operable" Tumors of the Cerebrum.—In a paper thus entitled Dr. CHARLES K. MILLS, of Philadelphia, who referred to the advance made in cerebral diagnosis and operations during the past decade or two.

Surgery in Relation to "Operable" Lesions of the Cerebrum.—In a paper thus entitled Dr. CHARLES H. FRAZIER, of Philadelphia, urged the importance of these cases coming to the surgeon early if he was to accomplish results, and particularly in cases of Jacksonian epilepsy. Exploratory craniectomies, except in cases of infantile encephalitis, were not recommended, and the employment of trephining might cause adhesions. A case was cited in which the placing of silver foil between the skull and the dura had resulted in convulsions.

The Treatment of Trifacial Neuralgia by Complete Avulsion of the Peripheral Branches of the Trigeminal Nerve was the title of a paper read by Dr. ERNEST LAPLACE, of Philadelphia (see vol. lxxxii, page 1197).

The Essentials of Successful Radium Therapy.—This paper was read by Dr. CHARLES LESTER LEONARD, of Philadelphia, who called attention to the fact that quality and strength of the current controlled the effect of the treatment, which might act according thereto as either a stimulant, alterative, analgetic, or escharotic, too light a dose stimulating the disease, while too strong a current would deleteriously affect the other parts. Success in treatment depended largely upon the skill of the operator, and the strength and distance of the current must be regulated for each individual case.

The Adjustment of Radiation for Various Physiological Effects was the title of a paper read by Dr. RUSSELL H. BOGGS, of Pittsburgh, who called attention to the necessity of careful study and application to the individual cases, and dwelt particularly upon the degree of vacuum, stating that during the last two years he had treated cases by five different degrees of vacuum.

The Treatment of Mediastinal Carcinoma by the X Ray was the title of a paper read by Dr. G. E. PFAHLER, of Philadelphia, who reported six cases of this condition following carcinoma of the breast, the first occurring in a woman, aged thirty-six, who had a primary growth removed. Sixteen months later a secondary growth appeared, which was removed and the x ray treatment instituted. She was now able to do her ordinary work. The second case was a secondary growth appearing three years after the removal of the primary lesion, which was treated on several occasions for a period varying from six weeks to three months by means of the x ray, and the patient had now apparently recovered. The third, fourth, and fifth cases were in women, aged, respectively, sixty-two, fifty-two, and sixty-two years, in whom the treatment had been instituted with good palliative results.

Dr. JAY F. SCHAMBERG, of Philadelphia, discussed the value of the x rays in dermatology, particularly in psoriasis, acne, and excessive growths of hair, compared the quantity and quality of rays required for these conditions with that required for malignant disease, and emphasized the necessity of their employment only by expert operators. In malignant disease surgical interference should be employed in "operable" cases,

and the x rays used as a postoperative measure and in "inoperable" cases as a palliative agent.

Dr. JOHN C. PRICE, of Scranton, emphasized the importance of careful individual regulation of the strength and quality of the rays and depreciated the fact that they were too often employed by the general practitioner without sufficient regard to these considerations.

Dr. ERNEST LAPLACE, of Philadelphia, urged that this agent should be employed only by competent men. He believed that during the early stages of malignant diseases, if the cells were of a low grade, the x ray possibly would destroy them.

Dr. CHARLES P. NOBLE, of Philadelphia, stated that the diagnosis of one of the cases reported by Dr. Pfahler had been confirmed clinically and microscopically. He believed that the field for this work was rather in postoperative and palliative measures than in "operable" cases in the first instance.

Conservative Treatment of the Enlarged Prostate.—A paper thus entitled was read by Dr. H. M. CHRISTIAN, of Philadelphia, who stated that the patient when first seen by the surgeon would present one of the following conditions: Good general health, moderate enlargement of the gland with increased urethral length, partial retention, residual urine varying from three to six ounces, urine sterile or slightly cloudy, indicating infection of the bladder; or the general health fair, marked enlargement and increased urethral length, complete retention, absolute catheter life, chronic cystitis, and the introduction of the catheter difficult and painful. Prostatectomy he viewed as in the domain of major surgery, and felt that it was justifiable only when there was acute or chronic cystitis, when catheterism was painful or difficult, or when the occupation of the patient prevented it, and in cases under the second class.

Dr. H. R. GAYLORD, of Buffalo, felt that there was great danger of infection, and probably the production of malignant disease, by the continued use of the catheter. He believed surgical interference should be undertaken in all cases, unless the patient was in too poor condition to warrant it.

Dr. RICHARD H. GIBBONS, of New York, discussed the various operations, including the Reginald Harrison and the Parker Symms methods, and remarked that by the latter the largest prostate could be removed in a short time. He urged operative interference in all cases, and said it should be done as soon as a collar was discovered about the urethra, the preferable anæsthetic being cocaine.

Dr. WILLIAM L. RODMAN, of Philadelphia, felt that an operation should be the rule rather than the exception, especially if the patient was not over fifty-five or sixty, and urged that it be done early. He felt that the operation of Hunter Maguire was the most appropriate one, and it could be done under a local anæsthetic. The danger of infection was too great to warrant a prolonged continuance of catheter life.

Dr. JOHN S. NILES, of Carbondale, felt that this disease was now occupying a position analogous to that held by appendicular inflammation a few years ago, and he believed the operation of Dr. Young, of Baltimore, to be the best means of procedure.

Recent Results in Cancer Research Which Bear on the Parasitic Theory was the title of a paper read by Dr. H. R. GAYLORD, of Buffalo, who, after giving a very careful and thorough résumé of the literature of the subject, including the recent experiments of Ehrlich and others, reported particularly on the work conducted experimentally on mice at the laboratory of Dr. Park, of Buffalo.

Meningocele was the subject of a paper read by Dr. GEORGE W. GUTHRIE, of Wilkes-Barre, in which he discussed the varieties of the disease, the ætiology, and the prognosis. He reported three cases of recovery.

Additional Observations Upon the Treatment of Empyema, with Special Reference to Irrigation of the Pleural Cavities, was the title of a paper read by Dr. P. Y. EISENBERG, of Norristown, in which he called attention to the fact that the puncture method was gradually giving way to the more radical procedures. He referred particularly to the cases of death reported to have been caused by flushing of the pleural cavity. He believed that the result could in most instances probably be explained by the physical condition of the patient, too much force, or too sudden distention of the pleural cavity, etc., rather than by the flushing per se.

Fractures of the Head of the Radius was the title of a paper read by Dr. T. TURNER THOMAS, of Philadelphia, who stated that a search of the literature revealed only forty-eight reported cases, and in only six of these had the diagnosis been made during life. He believed that the cases were more frequent than was supposed.

(To be continued.)

Book Notices.

A Handbook of Surgery for Students and Practitioners. By FREDERIC RICHARDSON GRIFFITH, M. D., Surgeon to Bellevue Dispensary, etc. With 417 Illustrations. Philadelphia: W. B. Saunders & Co., 1904. Pp. 579.

This little book has the same faults that are inseparable from all attempts to condense the whole range of surgery into a small volume. Although the author says in his preface that he has attempted to give the essentials of the subject in as concise a manner as is consistent with clearness, he has condensed to such an extent that the latter condition has been sacrificed. For instance, in speaking of the preparation of the operating room he suggests the mopping or sponging of the floors and woodwork with five different solutions. We suppose that he intended to indicate that any one of the five would answer the purpose, but as the matter stands at present the reader would be led to the conclusion that all five should be employed. Personally we do not favor these attempts to reduce the whole subject of surgery, including the special subjects of the nose and throat, eye and ear, and skin, so that it may be included in a work of this class. Necessarily accuracy must be more or less lost in the condensation, and we believe that often those who depend upon a book of this character for information are led astray. This is, however, as complete a handbook as we have seen, and answers the purpose for which it is intended as well as any of them.

Précis de laryngologie, clinique et thérapeutique. Maladies du pharynx et du larynx. Par le Dr. P. LACROIX, membre de la Société de laryngologie et d'otologie de Paris. Paris: F. R. de Rudeval, 1906. Pp. iv-627.

This is a practical, though concise, presentation of the technics, diagnosis, and treatment of diseases of the pharynx and larynx, and a book one could recommend advisedly. Bibliography, speculative bacteriology, and pathogenic theory have been entirely omitted, and clinical facts substituted.

It is a book briefly and practically covering all the latest measures in the treatment of pharyngeal and laryngeal diseases. Bronchoscopy has been comprehensively discussed, and the chapters on diphtheria are particularly exhaustive.

It is to be regretted that no consideration has been given to the nose, as its manifold disturbances produce undoubtedly many of the symptoms of pharyngeal and laryngeal involvement.

Counsels and Ideals from the Writings of WILLIAM OSLER. Boston and New York: Houghton, Mifflin, & Co., 1905. Pp. xiv-277.

This dainty collection of extracts from the writings of Dr. Osler has been prepared by Dr. C. N. B. CAMAC, of New York. There is abundant evidence in the volume that Dr. Camac's task was a labor of love, and the character of the contents is an entire justification of his undertaking. The profession is familiar with Dr. Osler's wealth of thought and felicity of expression, and we are sure that this handy little volume of gems from his letters, his nontechnical lectures, and his addresses will be greeted with enthusiasm. Some of the excerpts are of almost lapidary brevity, but they are all pervaded with the spirit of broad philosophy and beaming geniality for which the great author is noted.

Differential Diagnosis and Treatment of Disease. A Textbook for Practitioners and Advanced Students. By AUGUSTUS CAILLE, M. D., etc. With Two Hundred and Twenty-eight Illustrations in the Text. New York: D. Appleton & Co., 1906. Pp. xxix-867.

This work, by a gentleman who has long been favorably known as a practitioner, amounts to a treatise on the practice of medicine. Indeed, it covers a number of topics not usually dealt with in such a treatise, including orthopædic surgery. As the various subjects of which it treats are handled within a medium compass, many of the details, particularly those of a speculative character, are omitted. This is not a fault, but rather an advantage to the busy practitioner. The descriptions of disease are pithy and lucid, and the treatment advocated is such as will meet with the approval of experienced physicians. All things considered, the book must prove a valuable addition to the practitioner's library. It is brought out in the handsome style that we are accustomed to look for in the Appletons' publications. It is unusually free from typographical errors, but we note one curious exception to this statement; on page 427 "anosuria" occurs twice, and *anosmia*, which the author undoubtedly wrote, does not appear at all. The volume is furnished with a remarkably good index.

Anatomischer Atlas in Stereoskopischen Röntgenbildern von Dr. ERNST SOMMER. Würzburg: A. Stubers, 1906.

The publication before us is the first part of what promises to be an interesting and instructive atlas of stereoscopic radiograms. The format is large octavo and embraces twelve pages of text and twenty plates mounted on cardboard, each with the necessary explanatory data, but arranged so that the skiagraphs can be viewed with any ordinary stereoscope. This first part comprises pictures of the skull, different portions of the vertebral column, the large and small joints of the upper and lower extremities, the pelvis, etc. The author has shown himself to be an expert radiographer, but as the illustrations are naturally greatly reduced in size, we question their value as compared with ordinary life size radiographs.

A Treatise on the Nervous Diseases of Children, for Physicians and Students. By B. SACHS, M. D., Alienist and Neurologist to Bellevue Hospital, etc. Second Edition, Revised. New York: William Wood & Co., 1905. Pp. xi-571.

This second edition of Dr. Sachs's work, which occupies a field to itself, will require no lengthy introduction to American readers, and the esteem in which it is held abroad is indicated by the translations into German and Italian which have been published, and the French edition which is soon to appear. In this new edition the chapters on anatomy and physiology have been omitted, also case histories and references to lit-

erature. Much new material has been added, and the chapters on epilepsy, chorea, cerebral tumors, and the mental diseases of childhood are especially noteworthy and valuable to the family physician and general practitioner.

Grundriss eines Systems der medizinischen Kulturgeschichte, nach Vorlesungen an der Berliner Universität (Wintersemester, 1904-5). Von Dr. JULIUS PAGEL, a. o. Prof. der Geschichte der Medizin. Berlin: S. Karger, 1905. Pp. 112.

This is a book which will please and interest everyone who has a taste for the broader aspects of medicine, and no physician can put it down without a higher opinion of his profession in the extraordinary array of distinguished members who have in all ages excelled in so many different fields of intellectual activity. The physician in philosophy, law, statecraft, war, history, science, philology, literature, art, mathematics, statistics, and pedagogy are some of the themes considered, and the doctor in more unusual relations as a titled man, as the husband of exalted princesses and celebrated actresses, and as a centenarian is also treated of. A work of this character is almost necessarily incomplete, and there are many omissions to be noted, especially of French and English names. A few errors may also be detected. Thus, on page 89 the authorship of *La Dame aux camelias* is mistakenly ascribed to Eugene Sue instead of to Dumas fils, and Dr. Oliver Wendell Holmes is referred to as the "bekannter Humorist of Dartmouth College in Boston." The institution of a course similar to these scholarly lectures of Dr. Pagel's at the University of Berlin would be an admirable addition to the curriculum of American medical colleges.

Radiotherapy in Skin Diseases. By Dr. J. BELOT. Translated by W. DEANE BUTCHER, M. R. C. S. New York: The Rebman Co., 1905. Pp. xv-463.

This is a most excellent translation of the second French edition, a work which has been received with singular favor by all those who have read it in the original. The title is not sufficiently comprehensive, as the work not only very thoroughly discusses the questions relating to the use of x rays in cutaneous diseases, but gives in addition a conspectus of the general principles of radiography, which are the foundation on which successful therapeutics must be based. The work is comprised in upwards of 460 pages, more than two hundred of which are covered before the subject matter of the title is reached. In this part of the book, however, there is not an unnecessary sentence nor a single word that could with advantage have been omitted. In the four hundred pages devoted to the treatment of dermal lesions the author not only gives his personal experience, but has drawn largely on the literature of the world, freely commending or criticizing the work of others. Radiography receives no separate or special attention, but we must advise those who are not thoroughly expert in this branch to carefully study the earlier pages. One of the chief claims of the book is the evident sincerity of the writer, who is a thorough master of the subject.

Transactions of the Southern Surgical and Gynecological Association. Vol. xvii, 1904. Pp. lxiv-521.

When this association was organized, in 1888, all its members were residents of the South. Of the 189 active members whose names we find in this volume, forty-three are Northerners—namely, eleven from New York, one from Indianapolis, six from Philadelphia, thirteen from Cincinnati, four from Chicago, four from Boston, one from Cleveland, one from Newark, two from Albany, one from Detroit, one from Rochester, Minn., one from Oshkosh, two from Buffalo, one from Fort Wayne, two from Pittsburgh, one from San Francisco, and one from Evansville, Ind. Of the forty-one

scientific papers published in the volume, fourteen are by Northern authors. It will be seen, therefore, that the association is becoming national in character. It is fitting, however, that the word "Southern" should figure prominently in its title, both in commemoration of its founders and as emphasizing the leading part which our brethren of the South have always taken in surgery and gynecology. The papers presented at the seventeenth annual meeting and the discussions that followed them are all important additions to our literature, and the volume is exceedingly creditable to the association.

Der ärztliche Ratgeber in Bild und Wort. Atlas und Hausbuch für Gesunde und Kranke. Unter Mitwirkung von BRUEHL (Berlin), CRAEMER (München), GRASSMANN (München), HAAB (Zürich), JORDAN (München), KERSCHENSTEINER (München), KRECKE (München), MUELLER (Graz), MUELLER (München), PRAUSNITZ (Graz), PREISWERK (Basel), SCHLOSSMANN (Dresden), SEITZ (München), WEYGANDT (Würzburg), herausgegeben von Dr. med. FR. SIEBERT. Mit 245 farbigen Abbildungen auf 74 Tafeln und 481 schwarzen Abbildungen in Text. München: J. F. Lehmann. Pp. xvi-1024. (From Paul B. Hoeber, New York.—Price, \$6.50.)

This is one of the most comprehensive medical books for popular reading that we have ever seen, and the profusion of its pictorial illustrations is such as to impress the lay mind powerfully, perhaps to horrify some readers. The editor has been careful not to give in it too much of therapeutics, so that it is not likely to fill the layman with the conviction that he can dispense with the services of a physician, and that is a great desideratum in a book of the sort.

X Ray Treatment of Cancer, Including Sarcoma.—Coley has had, since February, 1902, 167 cases of malignant disease, which he classifies as follows: Sixty-eight cases of sarcoma; thirty-six of carcinoma of the breast; forty-four of epithelioma of the head, face, neck, and tongue; fourteen of deeply located abdominal growths, probably carcinoma; and five not classified. He obtained complete disappearance of the tumor in five of the sarcoma cases, but in every one, recurrence took place a few months later, while in two the recurrent growth disappeared again under the treatment of x rays and mixed toxins. Of the thirty-six cases of carcinoma of the breast only one tumor disappeared, while in every other case there was a recurrence; of the forty-four cases of epithelioma of the head only four were cured; of the fourteen abdominal growths ten were absolutely unaffected, while in four there was a slight improvement. Coley draws the following conclusion: "1. That the x ray exerts a powerful influence upon cancer cells of all varieties, but most marked in cases of cutaneous cancer. 2. In some cases, chiefly in superficial epithelioma, the entire tumor may disappear, probably by reason of fatty degeneration of the tumor cells with subsequent absorption. 3. In a much smaller number of cases of deep seated tumors, chiefly cancer of the breast and glandular sarcoma, tumors have disappeared under prolonged x ray treatment. In nearly every one of these cases, however, that has been carefully traced to final result, there has been a local or general return of the disease within a few months to two years. 4. In view of this practically constant tendency to early recurrence, furthermore, in the absence of any reported cases well beyond three years, the method should never be used except in inoperable cases, or as a prophylactic after operation as a possible, though not yet proven, means of avoiding recurrence. 5. The use of the x ray as a pre-operative measure in other than cutaneous cancer is contraindicated.—*Annals of Surgery*.

Miscellany.

The Relation Between Climate and Health, with Special Reference to American Occupation of the Philippine Islands.—Washburn, in the *American Journal of the Medical Sciences*, for September, 1905, gives an interesting discussion of this subject with the following conclusions: 1, With respect to the principal climatological factors, temperature, humidity, and atmospheric movements, the climate of the Philippine Archipelago is not extreme, as it is distinctly insular in character, the greater portion of the land area being not far distant from the ocean; there are other modifying influences which obtain in different portions of the Archipelago, such as general oceanic and local interisland currents, prevailing winds, elevation, the state of cultivation and drainage of the soil, and the presence of forests and other plant life; 2, excluding localities in the tropics characterized by excessive heat, high relative humidity, or unhealthy soil conditions, acclimation, or physiological adaptation of the white man to tropical environments is possible; 3, if acclimation is possible colonization is possible; 4, failures of the white race to live in the tropics and maintain health, excluding localities indicated in the second conclusion, appear to have been due principally to non-observance of the rules of personal, domestic, and public hygiene; 5, as a rule, Americans appear to become acclimated in the Philippines in the third year of their residence; 6, with sanitary surroundings and by observing the rules of personal and domestic hygiene, residence of Americans in the Philippine Islands appears to be attended with as little danger of disease and death as residence in the United States under similar sanitary conditions.

Medical Nomenclature.—Dr. Achilles Rose, of New York, makes the following remark in the *Post Graduate*, October, 1905: "When a man is prevented from uttering his genuine sentiments, if he is an honest man he says nothing at first, but when he finds that silence is doing him harm he resorts to hypocrisy when he still keeps silent or speaks and teaches what he himself does not believe. Such hypocrisy—called politics—corrupts a large part of the nation, the members of a political organization or State, and where this spirit prevails you cannot find a single citizen of whom it can be truly said: He is a man who speaks exactly what he thinks."—Adamantios Korais. Encouraged by these words of the great physician and scholar Korais I wish to say: No physician, no man in the whole civilized world can contradict the statement that our medical onomatology is to a great extent a corrupt, illiterate, and ridiculous and absurd jargon, and that this condition will continue to grow worse as long as writers, who have no knowledge of the Greek language coin and introduce words supposed to be derived from Greek which are incorrect, absurd, ridiculous, and even indecent. With the current medical jargon, science, properly so called, can have no fellowship. Our onomatology

needs reform and such reform I wish to propose. I wish, however, this work to be undertaken in like manner as Lavoisier's reform of chemical nomenclature was undertaken, that is, it must be looked upon as a national work to the greater honor of the medical profession. No confusion need to be feared in introducing correct scientific terms.

Official News.

United States Public Health and Marine Hospital Service:

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending January 6, 1906.

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
California—San Francisco.....	Dec. 16-23.....	3	
Florida—Jacksonville.....	Dec. 23-30.....	5	
Kentucky—Covington.....	Dec. 23-30.....	1	
Louisiana—New Orleans.....	Dec. 23-30.....	6	
Louisiana—Shreveport.....	Dec. 23-30.....	1	
Maryland—Baltimore.....	Dec. 23-30.....	11	
Missouri—St. Louis.....	Dec. 23-30.....	1	
New York—Niagara Falls.....	Dec. 23-30.....	1	
Ohio—Dayton.....	Dec. 23-30.....	1	
Pennsylvania—Lancaster.....	Dec. 23-30.....	1	
Wisconsin—Milwaukee.....	Dec. 23-30.....	1	

Smallpox—Foreign.

Africa—Cape Town.....	Nov. 11-18.....	2	
Chile—Antofagasta.....	Nov. 12-26.....	42	9
Chile—Quimbo.....	Nov. 9-23.....	15	4
Chile—Iquique.....	Nov. 26-Dec. 2.....	10	6
China—Shanghai.....	Nov. 15-22.....	100	25
France—Paris.....	Nov. 30.....		Present.
Gibraltar.....	Dec. 2-16.....	48	5
Great Britain and Ireland—	Dec. 10-17.....	1	
Drogheda.....	Dec. 2-9.....	1	
Great Britain and Ireland—	Dec. 2-9.....	3	
Hull.....	Dec. 28-Dec. 5.....		1
India—Bombay.....	Nov. 18-25.....		4
India—Calcutta.....	Nov. 26-Dec. 3.....	1	
India—Karachi.....	Nov. 25-Dec. 1.....		7
India—Madras.....	Nov. 30-Dec. 14.....	36	
Italy—General.....	Dec. 7-11.....		1
Italy—Catania.....	Dec. 19-26.....		2
Mexico—Tuxpam.....	Dec. 2-9.....	12	7
Russia—Odessa.....	Nov. 18-Dec. 2.....	7	
Russia—St. Petersburg.....	Nov. 1-30.....		1
Spain—Cadiz.....	Dec. 10-17.....	4	
Spain—Santander.....	Nov. 1-30.....		1
Spain—Seville.....			

Yellow Fever.

Cuba—Habana.....	Dec. 27-29.....	2	1
Mexico—Merida.....	Dec. 17-23.....	1	1
Panama—Colon.....	Dec. 7-14.....	1	

Cholera—Insular.

Philippine Islands—Manila.....	Nov. 11-18.....	8	10
--------------------------------	-----------------	---	----

Cholera—Foreign.

India—Calcutta.....	Nov. 18-25.....		86
India—Madras.....	Nov. 25-Dec. 1.....		6
Russia—Government of Lomza.....	Nov. 23-Dec. 6.....	12	3
Russia—Government of Siedec.....	Nov. 20-26.....	7	2

Plague.

Africa—Cape Colony—Port Edizabeth.....	Nov. 11-18.....	1	
China—Hongkong.....	Nov. 18-25.....	1	
China—Niuschwang.....	Nov. 30.....		Present.
India—General.....	Nov. 1-30.....	2	2
India—Bombay.....	Nov. 28-Nov. 4.....	4,356	3,090
India—Calcutta.....	Nov. 25-Dec. 5.....		7
India—General.....	Nov. 18-25.....		22
Peru—Antofagasta.....	Nov. 12-26.....	9	5

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending January 3, 1906:

BERRY, T. D., Passed Assistant Surgeon. Directed to proceed to Tampa Bay Quarantine, Mullet Key, Florida,

and assume command of the Service, relieving Assistant Surgeon R. E. Ebersole.

LLOYD, B. J., Assistant Surgeon. Assigned to duty in the office of the United States Consulate at Guayaquil, Ecuador.

LYALL, R., Acting Assistant Surgeon. Granted three days' leave of absence from December 26, 1905, under Paragraph 210, Regulations.

NEVES, GEORGE, Pharmacist. Granted leave of absence for nineteen days from January 1, 1905.

WIGHTMAN, W. M., Assistant Surgeon. Relieved from duty at San Francisco Quarantine Station, and directed to proceed to Callao, Peru, for duty in the office of the United States Consulate.

WILSON, R. L., Passed Assistant Surgeon. Bureau letter of December 1, 1905, granting Passed Assistant Surgeon Wilson fifteen days' leave of absence amended so as to grant thirteen days' leave only.

Board Convened.

A board of officers was convened to meet at the Bureau December 28, 1905, for the purpose of making a physical examination of an officer of the Revenue Cutter Service. Detail for the Board—Assistant Surgeon General J. W. KERR, chairman; Assistant Surgeon J. W. TRASK, Recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 6, 1906:

BROOKS, WILLIAM H., Captain and Assistant Surgeon. Advanced from the grade of first lieutenant to that of captain, from January 1, 1906.

COFFIN, J. M., First Lieutenant and Assistant Surgeon. Leave of absence extended fifteen days.

DAVIS, WILLIAM B., Lieutenant Colonel and Deputy Surgeon General. Leave of absence extended two months.

GREENLEAF, HENRY S., First Lieutenant and Assistant Surgeon. Assigned to duty as surgeon of the transport *Sherman* during the next voyage to Manila.

MABEE, JAMES I., First Lieutenant and Assistant Surgeon. Assigned to duty as surgeon of the transport *Sheridan* during the next voyage to Manila.

MANLY, C. J., Captain and Assistant Surgeon. Leave of absence extended thirty days.

PAGE, HENRY, Captain and Assistant Surgeon. Relieved from duty in the Philippines Division, about March 5, 1906, and will proceed to San Francisco, Cal., where he will report to the Military Secretary for further orders.

REYNOLDS, F. P., Captain and Assistant Surgeon. Ordered to Headquarters, Department of the Columbia, Vancouver Barracks, Wash., for temporary duty as acting chief surgeon.

TALBOTT, E. M., First Lieutenant and Assistant Surgeon. Leave of absence extended thirty days.

WILLIAMS, A. W., First Lieutenant and Assistant Surgeon. Assigned to duty as surgeon of the transport *Meade* during the next voyage to Manila.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending January 6, 1906:

BLOCK, W. H., Acting Assistant Surgeon. Appointed an acting assistant surgeon from January 12, 1906.

CAMPBELL, R. A., Acting Assistant Surgeon. Appointed an acting assistant surgeon from January 9, 1906.

HART, G. G., Acting Assistant Surgeon. Appointed an acting assistant surgeon from January 10, 1906.

HERNDON, C. G., Medical Inspector. Having been examined by a retiring board and found incapacitated for active service on account of disability incident thereto, is retired from active service, from December 15, 1905, under provision of section 1453, revised statutes.

MILLER, J. T., Acting Assistant Surgeon. Appointed an acting assistant surgeon from January 9, 1906.

MURPHY, J. F., Assistant Surgeon. Ordered to the naval recruiting station, Omaha, Neb., January 24, 1906.

SCHEPKY, L. O., Pharmacist. Appointed a pharmacist from December 27, 1905.

WINN, C. K., Acting Assistant Surgeon. Detached from the naval recruiting station, Omaha, Neb., January 24, 1906, and ordered to the naval hospital, Washington, D. C.

Births, Marriages and Deaths.

Married.

BUECHEL—RABYOR.—In Portland, Oregon, on Monday, December 18th, Dr. Francis Morris Buechel and Miss Sadie Mae Rabyor.

CORWIN—PETTIT.—In Brooklyn, N. Y., on Wednesday, January 3rd, Dr. Benjamin F. Corwin and Miss Ada H. Pettit.

FEDERMANN—WILDER.—In Milwaukee, Wisconsin, on Tuesday, December 26th, Dr. Edwin H. Federmann and Miss Erma Wilder.

HOIDALE—MADEIRA.—In Kansas City, Missouri, on Thursday, December 21st, Dr. Andrew Donovan Hoidale and Miss Pauline Madeira.

LONGFELLOW—WEINGARTNER.—In Philadelphia, on Monday, January 1st, Dr. J. Winslow Longfellow and Miss Agnes A. Weingartner.

NEWTON—SANBORN.—In San Francisco, California, on Tuesday, December 26th, Dr. John Crockett Newton and Miss Frances May Sanborn.

SKAGGS—DARE.—In St. Louis Missouri, on Monday, December 25th, Dr. C. S. Skaggs and Miss Nellie E. Dare.

Died.

ARMSTRONG.—In Wayne, Pennsylvania, on Wednesday, December 20th, Dr. William Chamberlain Armstrong, aged forty-seven years.

BEARD.—In New Haven, Connecticut, on Monday, January 1st, Dr. Theodore E. Beard, Jr., aged forty-one years.

BECKE.—In Wilkesbarre, Pennsylvania, on Monday, December 25th, Dr. C. S. Becke.

BLUE.—In Rome, Georgia, on Monday, January 1st, Dr. W. R. Blue, of Louisville, aged forty years.

COATS.—In Kansas City, Missouri, on Saturday, December 30th, Dr. Oliver P. Coats.

DOANE.—In Hyannis, Massachusetts, on Friday, December 29th, Dr. George W. Doane, aged eighty-one years.

FRANCIS.—In Buffalo, N. Y., on Wednesday, December 27th, Dr. W. R. Francis, of Marion, Indiana, aged fifty-six years.

HARRIMAN.—In Hudson, Massachusetts, on Thursday, December 28th, Dr. James L. Harriman, aged seventy-two years.

HATHAWAY.—In Toledo, Ohio, on Thursday, January 4th, Dr. Harrison S. Hathaway, aged sixty-four years.

HAYWARD.—In Brooklyn, N. Y., on Wednesday, January 3rd, Dr. Mary Hayward, aged seventy-six years.

HILL.—In Buffalo, N. Y., on Monday, December 25th, Dr. Clayton L. Hill, aged sixty-six years.

HOLLAND.—In Westfield, Massachusetts, on Friday, December 29th, Dr. James W. Holland.

KING.—In Damascus, Ohio, on Wednesday, January 3rd, Dr. Frank M. King.

LOGAN.—In San Francisco, on Tuesday, December 26th, Dr. Milburn H. Logan.

McFALL.—In Nashville, Tennessee, on Wednesday, December 20th, Dr. D. M. McFall, aged seventy-two years.

MELZE.—In Chicago, on Thursday, December 28th, Dr. Louis A. Melze, aged fifty-eight years.

SIMMONS.—In Hagerstown, Maryland, on Saturday, December 30th, Dr. Thomas W. Simmons, aged sixty-nine years.

TAYLOR.—In Columbia, South Carolina, on Wednesday, December 27th, Dr. B. W. Taylor, aged seventy-two years.

WHITE.—In Amsterdam, N. Y., on Friday, December 29th, Dr. William Maxwell White, aged fifty years.

New York Medical Journal

INCORPORATING THE

Philadelphia Medical Journal and The Medical News

A Weekly Review of Medicine

VOL. LXXXIII, No. 3.

NEW YORK, JANUARY 20, 1906.

WHOLE No. 1416.

Original Communications.

THE PRIMORDIAL NATURE OF THE FORCES EXERTED AGAINST THE PENETRATION OF BACTERIA BENEATH THE SURFACE OF THE BODY.

By JONATHAN WRIGHT, M. D.,

NEW YORK.

It is a poor kind of human intellect which is satisfied by facts and content to abstain from speculation and ratiocination as to their significance. Of course all workers in science must recognize the danger of speculation. It is that of drifting out of the known and knowable into the quicksands of metaphysics, and erecting thereon hypotheses which, for a time, resist the demonstration of facts and blind us as to their significance. Such dangers are encountered in all spheres of human activity, but they are inherent in and necessary for all progress, inventive, moral and physical, as well as intellectual.

It only requires a slight acquaintance with medical history to reveal to us the frequency with which medical science has been led astray and into extravagances by prematurely adapting to its exigencies the general ideas of scientific speculation; but if we are thus reminded of the exaggerations of iatrochemics and iatrophysics, of the vitalists and the animists, we must bear in mind also their influence for good on the course of medical science.

To avoid the exaggerations and to minimize the evils attendant upon deductive reasoning, theories must be looked upon simply as working hypotheses, and subjected to the constant criticism of experience and observation. The failure to appreciate the latter has led astray those who have grounded their superstructure of the ætiology of disease on experimental work in bacteriology. It was not the assimilation of the science of Pasteur and Tyndal, it was the misuse of it. It was the neglect of clinical experience, not the appreciation of the new world opened to us in biology, which caused us to disregard the intrinsic factors of disease. We are returning to the just appreciation of them.

That as a matter of fact speculation never has been abolished from science is evidenced in the history of the atomic theory. In chemistry a pure speculation, that of old Democritus, of

Abdera, who had it from some one else, was necessary as a working hypothesis, and it now seems certain that what was regarded at first as a mere formula was in reality a statement of fact. Speculation never has been and never will be abolished from scientific activities. The inductive method as an exclusive method in science is absurd, quite as absurd as the deductive method pursued exclusively by the old esoteric philosophers in their tubs. We must go back to the fundamental attributes of atoms and molecules for an understanding of many of the phenomena of immunity.

It is said¹ that the great Cuvier, autocrat of all contemporary biology, was careful that the French Academy should encourage by its praises only those who established positive facts, and should preserve an absolute silence on the "systems," which were urged from time to time. "An absolute silence" as to Lamarck, after Cuvier finished with him and St. Hilaire, was possible for about 50 years; but a further discussion of his "system" would have anticipated Darwin. Thus inaugurated in the last century, the inductive method was pushed to such ridiculous extremes, that pedantic intolerance viewed with scorn anything but the almost automatic registration of observed facts.

Without considering the percentage of mistaken observations, registered as facts, to which even such a matter of fact person as Karl Pearson has savagely drawn attention, the waste of the highest form of energy, cerebral energy, would be enormous in that arid field of human endeavor from which should be banished imagination and deductive ratiocination, the historical sense of proportion in the value of facts and the correlation of isolated bits of knowledge. It is the arrogance of unconscious dogmatism to regard these as noxious weeds. We may congratulate ourselves that we are passing out of the hateful era of narrow specialism defended by Cuvier. Whatever may have been the need then, it is no longer beneficial.

Goethe, living as he did in the eighteenth and nineteenth centuries, was the bridge between the old and the new order of things inaugurated a hundred years ago. The imaginative power of Goethe, which helped to make him the sublime poet, rendered an inestimable service to Science in his foreshadowings of many of the fundamental principles of the modern conception of Evolution.

¹ Merz: *History of European Thought in the Nineteenth Century*, v. 1, p. 125.

In striking contrast we remember that his observation of what he thought facts resulted in his erroneous *Color Theory*, while his conception of the *Metamorphosis of Plants and Animals*, on the other hand, was due to the agency of those sensitive antennae of the poet's mind which recognize in advance the significance of dawning knowledge. If we turn to his philosophical novel, *Elective Affinities*, we will find a scarcely less striking example of this wonderful instinct of the poet scientist.

The parallel between the psychic qualities of hate and love and the physical forces of attraction and repulsion was drawn by Empedocles more than 2,000 years ago,² but it was nothing less than the inspiration of genius that Goethe should perceive in the nascent knowledge of contemporaneous chemistry the law in physics which underlies the affinity of the sexes. Even then it was for him the biological expression of a chemical formula. With unerring faculty he strode on one path across the whole field of natural science and he clothed the cruder but more detailed concepts of Hckel with the flowers of immortal beauty.³ Hckel conceives even of sensation as the manifestation, in animals endowed with consciousness, of this law of molecular attraction and repulsion.⁴ If we pursue the idea into its modern development, which has received a great impetus from recent revelations in physics, the most cautious, I think, will see therein the value of something beyond the mere registration of facts; and that is the appreciation of the direction in which they point. Later it will be necessary to keep in view another parallel, drawn prematurely many years ago at the birth of the cell theory of living things: Schleiden and Schwann noted the resemblance in the growth of the cell to the growth of a crystal of inorganic matter. This has been in later days greatly elaborated by Spencer and Hckel, and is another instance of the value of "speculation." How fully it has penetrated conservative scientific thought is seen in the attempts to classify Burke's radiobes. Whatever is the final explanation of them, the discussion concerning them and like bodies has brought out the accepted view that this is in fact the border line between the organic and the inorganic, where molecular forces lose their distinction of chemical and physical.⁵

In some recent articles I have recorded⁶ suggestions arising from studies of the faucial tonsil and its bacterial flora, which have extended in a desultory fashion over the best part of ten years. Until the publication of some of the later work in biology and physics, as well as of that in the

special field of immunity, I was entirely at a loss to formulate any suggestions in explanation of certain observations I had made on the differentiation in the behavior of dust and bacteria in the crypts and on the surfaces of the faucial tonsils. The dust must be considered as representing inorganic matter and the bacteria as foreign protoplasm to the presence of which it has been demonstrated the animal body makes various responses. In the first place the promptness with which the dust, matter which certainly is entirely inert, passes through the epithelium is very astonishing. We can imagine that it is connected in some way with currents set up by the dialytic forces of osmosis exhibited by animal membranes, but so far as I can perceive at present, it is not absolutely necessary to know more than that it does readily pass. What I am concerned with is, why the bacteria, under normal conditions, do not also pass, as they are vastly more numerous and constant than dust in tonsillar crypts.

I cannot venture to repeat the various hypotheses I considered in the articles cited, but before they are entirely buried in the oblivion, which an all but infinitesimal part of recorded work meets, I desire further to develop one line of thought there broached, to which what I have written above may serve as an introduction. As for the other considerations, those chemical aspects of immunity presented by a study only of the circulating fluids of the body are insufficient to solve the problem of the entrance of disease germs beneath the surface.

The words "immunity" and "infection" in their strict etymological sense, "the walling in of the body against the carrying in of germs," applies to this part of the problem rather than to what goes on after they do get in. First let us get rid also of "causes." We can never "explain" anything. Even following Hckel to the ultimate monistic limit of conception, we must take off our hats to the great mystery at last and end as we began with the puerile "Why?" All we can do is to attempt to answer the more modest question "How?"

Many who have studied the phenomena of cell division have been struck with the resemblance of the karyokinetic figures to those made by iron filings in the fields of the two poles of an electromagnet. The chromatin granules of the nucleus are thrown into more or less straight lines converging at each pole of the nucleus and called chromosomes. This is still more marked in the behavior of the centrosome, which seems to furnish a centre from which stimuli to cell division are imparted to the cytoplasm as well as to the karyoplasm. All this is very imperfectly understood even by the closest observers, but the processes inevitably suggest the presence within the cell of some form of electrodynamics which now is recognized, not only as the fundamental attribute of all matter, but as the very substance of all matter. There is doubt expressed by many observers as to the interpretation of the linear arrangements of the protoplasm in the asters and attraction spheres, some holding it really to be fibrillar rather than an alignment of granules along symmetrical paths, or molecular currents set in

² In an article in one of the current reviews, thus far from its source, we may note the idea that "association with a person of opposite sex and of suitably reciprocal polarity will probably result in amatory attraction."

³ "The only production of wider scope in which I am conscious of having labored for the development of a pervading idea was in the elective affinities." *Gesprche mit Eckermann*, May 6, 1827.

⁴ This most ingenious idea of the great evolutionist may be found in a popular form in the *Wonders of Life*, American edition, p. 296.

⁵ Claude Bernard long ago pointed out the essential identity of the conception of the chemical and of the morphological synthesis of protoplasm, although he considered them as different phases of the same phenomenon.

⁶ The Equilibrium Between Infection and Immunity as Illustrated in the Tonsillar Crypts, *Medical News*, March 4, 1905.

The Difference in the Behavior of Dust from that of Bacteria in the Tonsillar Crypts, *New York Medical Journal*, January 6, 1906.

motion by intrinsic and interactive forces. Perhaps it may be shown in the future that this is simply two ways of apprehending the same phenomenon, for after all in these minute structures we must analyze our meaning of fibrillæ. These phenomena at any rate become more active and prominent under the stimulus which leads to cell division whether that stimulus is supplied by a spermatozoon or by a chemical as in the artificial production of parthenogenesis, or by the still more mysterious process of cell nutrition.

There are so many converging indications of it that we may indeed conclude that these figures are what they appear to be, i. e., manifestations of an intracellular electrodynamic polarity. Dormant at times, at times active in a physiological way, during which in a condition of equilibrium normal cell division occurs; at other times, when the equilibrium is upset by intrinsic or extrinsic causes, we have the occurrence of a cell division which is the beginning of a heterogenesis. This heterogenetic cell may survive and may result in the production of new types of life, new species. As I write this there comes under my notice in a daily paper the statement by Dr. McDougal that he has in fact produced a mutation in plants by injecting a chemical compound into their ovaries, thus artificially stimulating them to the production of aberrant forms. If this is confirmed by a more reliable form of report it may be looked upon as a proof of the possibility of artificial heterogenesis. On the other hand, the disturbance of this primordial molecular relationship may result in aberrant cell forms of another kind. I mean cancer. Those who will read with care Hansemann's recent paper in the *Zeitschrift zur Krebsforschung*, vol. III, part 4, will perceive, near the close of it, how this conception of the origin of cancer has also arisen in his mind, as correlated with generation and regeneration. It needs but a step to perceive that heterogenesis is only another aspect of disturbance of the same primordial forces. A new species is a heterogenesis which survives. A cancer is a heterogenesis which perishes because it kills the stem from which it springs.

If we see so many facts pointing to the existence of intracellular forces of attraction and repulsion, if we consider that this is the fundamental manifestation of all matter, and if we know from biological and chemical studies that it is more pronounced between heterogenetic units of protoplasm than homogenetic, which is in accordance with the results of recent work on immunity in its usually received meaning, we cannot escape the belief that the relation of the bacterium to the epithelial cell of the tonsillar crypt can only be investigated in the light of a fundamental knowledge of electrodynamics. There are reasons to believe that it is especially that manifestation of force which is known as surface tension, or the distribution of electricity on the surface of electrified bodies, which will be likely to be exhibited in the interrelation of the cell and the microbe. It is static electricity which we may be pretty sure will furnish the key to much that is now mysterious in chemotaxis. It will be fruitful to keep in mind the functions of the elec-

trical organ in certain fishes and the power of certain protozoa to paralyze their prey at a distance. We must look upon these as having been evolved from that primordial inherent power of protoplasm with which we are now concerned. These should not be unfamiliar thoughts to us, when we reflect how the retina has been evolved out of a response to the stimulus of undulations in the luminiferous ether.

At first the protoplasm of some of the lower protozoa seem to receive the accretions by which they grow from their environment without any manifestation of its power to discriminate, but differentiation appears as we go higher up in the scale of the protozoa; the useless is voided and the harmful avoided. If we are compelled to assume a dynamic manifestation in order to comprehend the conjugation of the metazoa as well as of the protozoa, there seems again no other refuge in studying the behavior of some of the protozoa in the presence of their natural food.⁷ The evidence of the excitation of a positive and a negative force of attraction and repulsion in the presence of suitable and unsuitable material for nourishment, cannot be disregarded. Generation and nourishment can become effective in the survival of the fit only when combined with some mechanism which also preserves the organism from destruction. We may presume then that the surface epithelium at the junction of the air way and the food way, the spot over which passes that which is absolutely necessary for life in animals, must have in some way evolved out of this primordial property of protoplasm the power to prevent harmful material from being absorbed.

Evidently in the general scheme of evolution we must conclude that intracellular activities are correlated with intercellular forces, though we may not go so far as to believe that in the multicellular organism the protoplasm of all the cells is continuous. We receive a hint of this correlation from many facts in biology. The phenomenon familiar to biologists of the attraction of the spermatozoon for the egg, best seen in water containing the eggs of frogs and fishes, is to be noted in connection with the activities set up in the cell after the entrance of the male germ. Let us then figure this as positive chemotaxis. To fill out the old idea of Empedocles and the more recent revival of Goethe, we have only to summon up the evidence for a negative chemotaxis in the phenomenon of bacteria held back at the periphery of the epithelial cell in the tonsillar crypt, as I have pointed out in my former papers.

I have referred to the insufficiency of a chemical conception of the problem, but we are so close to its border line that we do not go far in stepping across. The problem of the fundamental forces of nutrition, cellular mitosis, and immunity lie deeper than is expressed in the concept of the cell as the unit of life. It is the chromatin granule which is the ultimate visible manifestation of life. It stands in the same relationship to the cell as the cell does to the body of the metazoa. In pathology nuclear fragmentation in

⁷ Calkins, *The Protozoa*, p. 309.

the presence of specific poisons is a manifestation of such a disturbance of this unit of life as, if it goes far enough, is fatal to the whole organism. What we will be able to see of the play of molecular forces, when the infant science of ultra-microscopy multiplies our vision a millionfold, can only be inferred from what we now see under its amplification of a thousand. Thus the present chemical reactions are to be regarded as evidences of the activities of small masses of molecules which we cannot see, while chemotaxis and nuclear division and fragmentation are simply activities of larger masses of molecules in the complex synthesis of protoplasm which we can see, but the forces which govern them all are fundamental and primordial and less differentiated than is commonly supposed.

Without a consideration of the two ideas of biological thought, shortly at war, now fused in a wider scheme of evolution, the survival of the fittest and the adaptability of protoplasm, united by the destruction of Weissman's hypothesis and the acceptance of the inheritance of acquired functions, we cannot understand how the protoplasm of the epithelial cell in the tonsillar crypt allows harmless inorganic dust to pass through, and arrests in a state of equilibrium (of health) the foreign organic protoplasm of bacteria at the surface, when it is not over potential or over numerous; that is, when it has not passed the limit to which the cellular protoplasm has adapted itself individually and in its inheritance. This is due to the transmission of those habits of molecular affinity and repulsion, which guide nutrition and which govern the determination of immunity and susceptibility.

Where should we expect environment more likely thus to modify protoplasm than in the external cellular rind of the metazoa? Where should we expect it more likely to exert its influence in the rise of local immunity, analogous to the evolution of the organs of special sense, than in the faucial tonsil? If these principles are efficient for the faucial tonsil, *mutatis mutandis* they must apply elsewhere, but I do not want to lose sight of the idea of local immunity, however broad a base I may have started from, for the factors of immunity in each locality must be moulded to intrinsic and extrinsic exigencies. They must not only be adapted to meet the enemy, they must avoid interference with other necessary physiological functions (altruism); hence they must vary with the locality. The part the fixed cells play in the complex problem of immunity and infection has been lost sight of in the distortion of the etymology of the words to which I have referred. From my point of view, then, I must speak of the circulating fluids of the body as a locality in which the process is modified to meet the demands, but apparently it is a locality in which the process to meet the great complexity of shifting cells and changing environment, also itself has evolved a great complexity. Out of this has grown the situation of confusion in which the biochemistry of immunity is involved, still further befogged by the most remarkable proliferation in terminology the history of medicine has ever seen.

As to the internal cell processes, we can only

conjecture that in the nuclear protoplasm, protected by the surrounding cytoplasm, resides the principal part of the energy which responds to external stimuli. Some hint of this may be seen in the tonsillar epithelium in the proximity of the nucleus of the cell in the superficial layers to the distal surface of the cell. We may suppose it is there in response to an external stimulus. In the germinal layers it is nearer the subjacent stroma. If we agree with the prevailing idea that in the chromatin of the nucleus resides the essential heredity which determines growth in accordance with ancestral forms, we note one more line of convergence towards the essence of the idea I have urged.

We thus see the thread of unity upon which the great German poet loved to dwell, which runs through the woof upon which at present is painted our conceptions of world processes.

In conclusion, it is clear then that if we are thus to conceive of the forces by virtue of which, in a state of equilibrium—a state of health—bacteria are prevented from penetrating the surface, the impulse which upsets that equilibrium is the agency through which they acquire the opportunity to follow the example of the dust.

Several years ago I demonstrated^a by a camera lucida drawing in color, the free passage of tubercle bacilli through the hyperplastic, but intact epithelium of a tuberculous larynx, unmistakably starting from the surface where they had been deposited from the lungs.

I have seen pyogenic cocci numerous in faucial tonsils forming small foci. That they at times do penetrate from the surface scarcely needs an objective demonstration. Following out the terms of our argument we must believe that when this occurs it is due to something which upsets the polarity by which one kind of protoplasm repels another kind of protoplasm. It is undeniable that we have good reason to believe that sometimes this impulse comes from without, due directly to the large numbers and the virulence of germs deposited in the crypts of the tonsils. I believe it is still more apparent that such is usually not the case. The change usually comes from within and that internal change is the permanent or temporary susceptibility, the predisposition; in other words, the low polarity of the surface epithelium towards the invading germ.

Just as Helmholtz pointed out the imperfections of the mechanism of the eye evolved by special stimulus in the ectoderm, we may daily observe the imperfections of local immunity evolved in the ectoderm by selection and by specific stimuli. It is clear that these imperfections are due to inexperience in heredity and incomplete evolution from natural selection. Burbank's most famous contribution to the aphorisms of biology is his expression that heredity is the sum of all past environment.

Bacteria in unwonted numbers and in unwonted virulence do penetrate the tonsillar epithelium and thus become the extrinsic factors of disease, but abnormal internal conditions of which we know little or nothing, in the conception which I have developed here, is usually sufficient to de-

^a *New York Medical Journal*, September 26, 1896.

stroy temporarily that polarity which normally exists between cell and bacterium, and as a consequence we have the penetration of microbes in numbers and in virulence habitual to the tonsillar crypt. This may or may not lead to clinical manifestations, since the result then depends upon the issue of the conflict between the germ and the other cells of the body or their derivatives.

44 WEST FORTY-NINTH STREET.

THE MAINTENANCE OF ASEPSIS.

By DANIEL H. CRAIG, M. D.,

BOSTON.

There are many surprising happenings in the practice of asepsis as distinguished from the theory. While it is difficult indeed in these days to find the practitioner who is not well versed as to the value of asepsis in the abstract, it is even more difficult to find one who is at all competent to adequately practise such asepsis unless he has served an apprenticeship of greater or less duration under some practical teacher. In other words, I feel that I am justified by experience in making the statement that an ability to maintain a rigid asepsis cannot be acquired from reading alone.

Before going further, permit me to explain that I do not believe that absolute asepsis of living tissues is or can be obtained except on possible rare, accidental occasions. By asepsis, then, as used in the following I mean the reduction of pathogenic organisms to so small a number that they shall not constitute a morbid, infectious dose for the individual patient. This dose unquestionably varies not only in different individuals, but also widely in the same individual under varying conditions, and therefore the only positive insurance we possess against a morbid infection is the invariable establishment and *maintenance* of the most absolute asepsis possible.

It is not my intention to exploit any particular method of sterilization either for the living tissues or for the inanimate accessories of the operation in this place beyond asking those practising such branches of medicine and surgery as demand asepsis to adopt the simplest, easiest methods which have been shown to be both bacteriologically and practically efficient. It is here, as nowhere else in life, that cleanliness is godliness and no elaborate processes are either necessary or desirable. It is my belief that antiseptics, with the possible exception of sixty per cent. alcohol, should be absolutely forsworn in the disinfection of living tissues and in the operating room. The long established and too long cherished use of the corrosive sublimate solution in the operating room as a hand wash is a delusion. No one will deny to corrosive sublimate its well deserved position at the head of the list of chemical disinfectants, or germicides, but everybody must concede from the reports of all bacteriological experts that it takes time for corrosive sublimate solutions to penetrate the capsule and destroy pathogenic organisms. Granting this, corrosive sublimate solution is in no sense superior for rinsing away infectious material adhering to any surface,

hastily, during the course of an operation, to plain sterile water. On the contrary, since by its employment the wet hand may convey an irritating chemical solution to the sensitive peritonæum or other equally sensitive surface upon which it may engender irritation, it is emphatically inferior to the plain sterile water. If we could allow the corrosive sublimate solution the time requisite for full action and then rinse away any remaining impurity with the sterile water, it would be of the greatest possible value. But even the minimum time admitted by bacteriologists as requisite would, in the midst of an operation, be absurd.

Since, therefore, we may not, except at the expenditure of a prohibitory amount of valuable time, restore a lost asepsis, the importance of the maintenance of the original asepsis is manifest, and it is to stimulate to this achievement that I am making this effort. Perhaps nothing will better serve to this end than the citation of a few illustrative examples of the ways in which I have personally observed the defeating of asepsis.

About a year ago it was my privilege to visit one of the largest hospitals of a neighboring city and witness the operating. During the course of a difficult appendicitis operation the surgeon decided to dispense with his rubber gloves, with the use of which he was not fully familiar. Stripping off the gloves, he, with his aseptized hand (and it had been excellently prepared), turned on the faucet, rinsed his hands, turned off the faucet, rinsed his hands for a moment only in corrosive sublimate solution, and proceeded with the operation. All this occurred with nurses and assistants in abundance in the operating room, any one of which could have saved him the necessity of the slightest contact with any unsterilized object. The dose of pathogenic material obtained from this contact with nonsterile material may or may not have been sufficient to constitute a morbid infection for that particular patient, but it certainly destroyed in one instant the results of many minutes of painstaking preparation. The patient's "resistance" is an unknown quantity which for safety's sake must always be considered as at a minimum.

Another illustrative instance occurred in a small rural hospital. The nurse, after elaborate hand sterilization, was not provided with a sterile gown, the operator and his assistants being thus provided, and when her hands were not in use she folded them behind her back, allowing them to rest upon her uniform, which was worn in all her work and must have been far from sterile. In this same operating room the field of operation was surrounded only by four small towels, no sterile sheets being used to cover the upper and lower portions of the patient, with the result that the patient, coming partly out of the anæsthetic, put her own hand into the wound and against the intestines. With regard for the maintenance of asepsis equal to the effort originally made to secure the sterility of all the parts this accident could not have happened.

A third instance, and the last I shall cite, occurred recently in my own operating room. After the patient was ready for the operation to begin a sterile sheet was thrown over the entire upper

part of her body, being carried up over her face far enough to screen the abdominal wound from saliva or other contamination if, under ether, she should cough or vomit. The patient's physician, standing beside the table, and whom I know to be a progressive and careful man and one who certainly understands the theoretical side of asepsis thoroughly and whose alma mater and date of graduation testify to the soundness of his teaching on the subject, carefully folded that sheet back so as to bring the parts which he had handled with his unsterilized hands into close proximity with the wound, necessitating, in the interests of the maintenance of asepsis, the substitution of a new sheet.

No one of these occurrences may have done any serious harm to the patient in question, but they were full of possibilities and certainly if left uncorrected would have placed an additional tax upon the patient's powers of "resistance." And speaking of "resistance" leads me to reiterate the belief that, since the establishment and maintenance of absolute asepsis are impossible to living tissues, the so called "reaction" temperature seen on the postoperative charts of surgical patients is in the vast majority of all cases, especially those in which no demonstrable degree of surgical shock obtains, neither more nor less than an index of the amount, or dose, of infectious material introduced.

It is, then, my desire, now that practically the entire profession realize and concede the value of asepsis and have learned how, by one means or another, to acquire a practical degree of sterility, that they now turn their attention to learning to maintain that sterility to the very end of its need; for believe me, except in the trained operator, and not always there, as shown in the foregoing instances, this ability is rarely seen. It is fortunately an acquirement which does not lengthen, but rather shortens every operation and requires only presence of mind sufficient to cause one to draw back his sterile hand, gown, or instrument from contact with an unsterilized object as he would his hand from a red hot coal. It means the acquirement of the "aseptic conscience" and its lack should be supplied along with the knowledge it enhances, for its acquirement is as easy by practice as is any other clinical or surgical manipulation.

386 COMMONWEALTH AVENUE.

SOME OF THE USES OF PELVIC MASSAGE.

By JOSEPH TABER JOHNSON, M. D.,
WASHINGTON, D. C.

There have always been fads and fanatics in the practice of medicine, and I presume there always will be. Men and sects have arisen since time immemorial who pretended to cure all manner of diseases. In most of the pretensions put forward one idea has predominated, until some other idea, made more plausible to the general public has displaced previous pretensions by more emphatic promises of cure.

Empiricism, as the generations grew more intelligent, has generally given way to scientific medicine and the civilized world is becoming more and more insistent upon a rational and effective therapeutics. There still exists, however, many theories for the eradication of the ills to which human flesh is heir, some of which are honestly, and some of which are dishonestly, practiced. It is not likely that this state of things will ever be entirely changed, until frail human nature is purged of its commercialism, and all men come to believe that, in the long run, honesty in the best policy.

There can be no doubt that some few men have been led to honestly embrace a single dogma and to practice it conscientiously in these latter days, and there is also no doubt that the one principle of treatment may have produced excellent results when applied to that one class of ailments, in which it was applicable, but the temptation has been, when faith was aroused and confidence secured, to promise more benefits in a variety of directions than could be realized. Some previously honest men allowed their commercial tendency to lead them into dishonestly promising more than they could perform.

Illustrations of this statement will probably occur to the minds of those present, and only one or two need be mentioned familiar to everyone.

For example the good results of water, cold and hot, inside and outside the human body are recognized and acknowledged by us all, in appropriate cases, and when employed in association with other remedies is productive of the best of results. But when a cure is promised by individuals, or water cure institutions for all, or inappropriate cases, the spirit of commercialism has outstripped the spirit of honesty.

The same is true of electricity, also of diet, of exercise, especially the exercise of faith, that beautiful and saintly virtue, when exercised in things spiritual, but when blindly exercised in the belief of things too material and commercial is prostituted to the extent of leading some of their innocent victims into the jaws of death, and through the gates of that bourne from which no traveller returns.

General and special massage has been in more or less use for the relief of the pains and the sprains of the human race, since the time when the Great Physician cured disease by the laying on of hands. That it benefits many abnormal conditions, and cures some, we all admit, but that it cures or even benefits all abnormal conditions, all honest men will deny. That it does much harm when applied in not appropriate cases is an accepted fact by all intelligent and honest men. The various methods of applying massage have the same objects in view, whether it be manual, vibratory, or electrical. The same may be said when employed generally, specially or locally. In all cases, this agency for good should be employed only after a careful and expert diagnosis has been made of the exact nature and stage of the disease or injury to be so treated. To massage an acute sprain or fracture is just as much an error as to massage an acute inflammation or abscess, while great good is accomplished in the improvement of the circulation, in promoting absorption, in soothing pain, in allaying nervous irritation and relieving insomnia in the chronic stages of these and many

other properly diagnosed conditions. Harm has been done by too early, too constant and too frequently repeated massage, by too zealous, ignorant and irresponsible persons calling themselves masseurs, and thus imposing a spurious article upon a too credulous and confiding public.

Institutions as well as individuals devoting their energies to this one method of treatment, or occasionally combining baths or electricity with it, are likely to do much harm unless they combine the rare virtue of the expert diagnostician with their manipulative skill in the use of those methods.

The question of "pelvic massage" was brought prominently before the public by Major Thure Brandt, of Stockholm, an officer in the Swedish army about 25 years ago. Major Brandt was an instructor in health gymnastics in that city, and from the preservation of the health of the Swedish officers, he gradually developed a system of Swedish movements, and hygienic gymnastics for the cure of disease among the officers suffering from torpid liver, constipation and hæmorrhoids, and finally extending his practice to the female sex. To abdominal massage and his system of hygienic gymnastics for the above mentioned ailments in both sexes he also added and developed a system of pelvic massage for the cure of many of the diseases and misplacements of the female pelvic organs.

So great was his success in the treatment of these conditions that his method attracted much attention, and he had many pupils from different parts of Scandinavia and Germany and some from France. He later on, his followers claimed, was able to cure permanently by abdominopelvic massage many of the chronic pelvic inflammations, especially those accompanied by exudates and adhesions, forcing the uterus and its appendages into malpositions. The two hands working together, sometimes in unison, and sometimes opposing each other, it was claimed would gradually and painlessly, after many sèances of from ten minutes to half an hour each, succeed in attenuating adhesions down to the disappearing point, in causing the absorption of effusions of greater or less density, finally liberating the uterus from its abnormal environment, and the tubes and ovaries from their beds of adhesions.

The attractiveness of these claims brought many timid women with pelvic diseases to those who practiced this method of treatment, and much was made of the successes which followed. It was called the "Bloodless Method," and was placed directly and prominently in contrast with the technique and occasional bad results of pelvic surgery. The point was constantly made that a surgical cure was frequently at the sacrifice of important organs, and even when the patient's life was threatened by the presence of abscesses or tumors, and saved by their successful removal, painful or disagreeable sequellæ which sometimes followed had finally to be removed by pelvic massage.

In the translator's preface of Dr. Ziegenspeck's book on pelvic massage the following is his opening sentence: "The medical world of to-day becomes more and more fully convinced of the fact that pelvic massage is to be classed among the most

important therapeutical measures in gynæcology, especially on account of the disappointment so frequently met with in the operative proceedings." Ziegenspeck says on page 12 of his book, after referring to the failure of many chieftains in medical science to recommend Brandt's treatment, that many of the lesser lights are using it with great success, and he constantly recommends it to his classes in the university. And after using it in over 1,000 cases with the greatest success, his conscience would revolt, were he to fail to recommend pelvic massage, in even a single instance, in which he had employed it in the past, as no method cured so quickly, and none had so few relapses. He says of local treatment that it consists with few exceptions in massage and stretching. He leaves out many of Brandt's hygienic gymnastics, and even changes the position of patient and manipulator from that illustrated in Brandt's book. "Massage serves to promote absorption of swellings and effusions and to relieve painful and swollen organs. Stretching is used in inflammatory processes where shrinking has set in, to lessen the adhesions which have formed in the pelvic connective tissue and to separate organs which have become adherent to each other by peritonitic exudations." "With the fingers of one hand in the vagina we stretch the fixating cord, while with the other hand, the band is massaged from the abdominal wall."

Gilliam, on page 358 of his textbook on gynæcology, in discussing the treatment best calculated to promote the absorption of exudate and restore the pelvic circulation to its normal equilibrium, recommends pelvic massage as of undoubted efficiency in promoting absorption and liberating adhesions, but he says before this is resorted to the presence of pus in the pelvis should be accurately determined lest serious damage ensues.

Garrigues says, on page 199 of his book on gynæcology, certain manipulations inside of the pelvis and through the abdominal walls constitute a valuable mode of treatment in many diseases of women, especially chronic metritis, cellulitis, peritonitic exudations, hæmatoma and oophoritis, etc., etc. In this way exudations, infiltrations, hypertrophies and adhesions are made to disappear, weak ligaments and muscles strengthened, and displaced organs brought back and kept in their normal positions. He thinks the procedures are so painful that there is no danger of causing sexual excitement. He recommends against its use if there is blood or pus in the tubes. Again, on page 473, while discussing the treatment of bound down retrodisplacements after condemning Schultz's method of forcibly breaking up adhesions, usually under the influence of an anæsthetic, he says of massage (Brandt's method): "Not less efficacious and safer than Schultz's is Brandt's method, that obtains similar results by means of manipulations directed through the abdominal wall and the vagina. By this method the adhesions are stretched gradually and made to be absorbed by increase in vital processes. If, however, there is a pyosalpinx or other purulent collection in the pelvis the pus may be pressed into the peritoneal cavity and cause acute inflammation that may end fatally."

Penrose thinks the results of pelvic massage in the treatment of chronic pelvic inflammation have

not been very encouraging. Reed and Baldy are practically of the same opinion.

Coe devotes 13 pages of his book on clinical gynecology (184 to 197) to a description of the uses and abuses of pelvic massage. He highly approves of its use in the chronic stages of pelvis exudations, such as Brandt and Ziegenspeck described as parametritis and perimetritis chronica; and of the pelvic swellings and adhesions which bind the pelvic organs together. He opposes its employment in all acute inflammations, infections and in pus collections. Where the masseur possesses sufficient expert skill to make the necessary differential diagnosis he may even go so far as to recommend such pressing and stroking manipulations as will empty sterile fluid collections of the Fallopian tubes into the uterus. Coe says that pelvic massage, when well carried out, is really one of the best means at our command for the treatment of uterine displacements caused by adhesions. Especially is this true of bound down retroversions and retroflexions. He thinks pelvic massage useful in amenorrhœa and dysmenorrhœa, where these conditions are dependent on faulty circulation, or upon obstructed venous circulation caused by displacements or effusions, or exudations pressing upon the pelvic vascular supply.

Dudley devotes an entire chapter to pelvic massage in his recent work on practical gynecology, introducing many of Brandt's descriptions and illustrations. He says that pelvic massage for chronic inflammation around the uterus, as developed by Thure Brandt, is one of the most effective of the nonoperative local measures, and is indicated for the removal of inflammatory exudates, the stretching and breaking up of adhesions, the restoration of function to contracted or over stretched ligaments, and reposition of the displaced organs. Dudley recommends women masseuses for obvious reasons. He also, as all the other authors I have quoted, speaks of massage only as one of the methods of nonoperative treatment, and while he thinks very highly of it in appropriate cases, also recommends surgical procedures for the relief of acute infections, malignant, ectopic and pus cases.

Montgomery's reasoning is the same as the others. Under the head of local therapeutics in gynecology, he says, page 109, of the Brandt system, "this procedure will be indicated in all subacute and chronic inflammations of the pelvic organs unassociated with pus formations, in displacements when fixed by inflammatory adhesions, in subinvolution and hypertrophy of the uterus, from chronic interstitial inflammation, and in relaxation of the pelvic floor from increased weight of pelvic organs."

In describing the treatment of uterine displacement he says, among other things, "with purulent inflammation or pus collections in the tube excluded, the absorption and loosening of the adhesions of the ovary tube and uterus can be effected by pelvic massage."

My own experience in the use of this method has been mostly in the nonoperative treatment of uterine displacements, and by nonoperative is meant those cases presenting uncomfortable and disagreeable symptoms, and yet not sufficiently dis-

tressing to suggest surgical operations. So far as my experience has gone mere displacements themselves have given very little trouble. The natural position of the uterus in the pelvis being one of entire mobility, the symptoms complained of are caused mostly by coexisting complications.

These complicating conditions were caused by the effusions, exudations, adhesions and chronic inflammations mentioned by the authors above quoted. When yielding to the importunities of the patients to try some nonsurgical treatment, I suggested pelvic massage, partly to gain time, and in some cases to demonstrate the uselessness of any but surgical methods. After a few weeks of treatment, the surprise of the physician was greater than that of the patient when the complicating conditions disappeared, and with them went the symptoms also. All cases cannot be thus treated successfully.

As frequently stated in the foregoing acute inflammations, infections, the presence of pus, malignancy and ectopic pregnancy contraindicate pelvic massage, but we do have many distressing retrodisplacements unaccompanied by any of the above mentioned associated contraindications, but complicated still, by those other associated conditions which are not included among the contraindications.

In those cases where one possesses the expert skill to differentiate the safe from the unsafe conditions, pelvic massage can be relied upon to restore abnormal to normal states when intelligently and honestly carried out by one fully understanding its details.

This method of treating uterine displacements has seemed especially applicable on account of our failure to definitely agree upon a surgical procedure which has found anything like universal acceptance.

Our surgical brethren actually rival Heinz with his 57 varieties of pickles, as more than that number of operations and modifications of operations have been proposed and practiced for the surgical relief of retrodisplacements of the uterus. This fact is evidence in itself that none of them are satisfactory to surgeons generally.

In December, 1904, I read a paper before the Southern Surgical and Gynecological Society on Ventrosuspension, and tried to convince its fellows that this operation was applicable to a wider range of cases than any other, notwithstanding its rare, but possible interference with pregnancy and labor, ventral hernia in a few cases, and failure to succeed in about 15 per cent. of still other cases. In the prolonged discussion nearly everyone had a little fault to find with ventrosuspension and finally closed his remarks by recommending some modification which he thought an improvement. Hardly any two, however, agreed upon any particular operation.

I thought then and still think this procedure has more to commend it and less to discredit it, than any other of the "57 varieties," when any surgical operation is required. Every surgeon knows that the same operation has to be differently performed in different cases. Women differ, their conditions differ, and their operations cannot all be the same. One has to fit the punishment to the crime, as they say in *The Mikado*.

In the *Journal of the American Medical Association*, for May 11th, is a very thoughtful article by

Dr. Lucy White, of Chicago, in which she attempts to prove that surgery is a dismal failure when attempted for the relief of uterine displacements. The paper fairly bristles with statistics. After a general attack on pelvic surgery for this purpose, she asks three very pointed questions: "1st. Are these operations (for retrodeviations of the uterus) necessary? 2nd. Are they safe surgical procedures? 3rd. Have they proven successful in a sufficiently large proportion of cases to warrant their continuance?" She concludes her paper as follows: "From the statistics cited and the testimony presented by the numerous witnesses quoted in my paper, as well as from the results of my own clinical observations, I feel warranted in answering the questions in the negative. Surgical procedures in retrodeviations are unnecessary, they are unsafe, and have not proven successful in a sufficiently large proportion of cases to warrant their continuance."

Dr. Hellen Hughes, of Minnesota, in the February 25th number of the *New York Medical Journal*, writes a paper on this subject, the first paragraph of which is as follows: "The importance of this disorder among the diseases of women is evidenced by the number of methods which have been exploited for its cure, none of which have been so satisfactory as to close the subject."

If all this be so, we may turn in the future to pelvic massage, which Ziegenspeck says he has tried in over 1,000 cases, and that no method cures so quickly and that none has so few relapses.

From all I have read and from a slight though increasing personal experience I believe there is much of good in pelvic massage, when properly used in properly diagnosed cases. Quite a bright future may yet open up for its expert use in the debatable and yet unconquered field of uterine displacements, but like all other good things it is liable to abuse by the unfortunately unexpert or commercially dishonest practitioner.

926 FARRAGUT SQUARE, N. W.

THE THERAPEUTICAL AND PROGNOSTIC VALUE OF OCCULT HÆMORRHAGE IN THE STOOLS.*

By J. DUTTON STEELE, M. D.,

PHILADELPHIA.

I have been asked to consider in this discussion the therapeutical and prognostic value of the presence of occult blood in the fæces in gastric ulcer. I am very glad to do this, because the symptom has won for itself a permanent place in the symptom complex of ulcer of the stomach and duodenum. Moreover, perhaps more than the other symptoms of gastric ulcer, it is capable of being used in the regulation of the diet in the determination of the prognosis, and, I hope, will be useful also in enabling the surgeon and physician to cooperate with greater certainty and success in the conduct of the treatment.

Before speaking of the various therapeutical uses of the test, I may say that too much must not be claimed for it. It is probably as liable to error and

exception as any of the other symptoms upon which we base our diagnosis of ulcer. It must be performed under suitable conditions as to food, and other sources of bleeding must be eliminated. But when this is done, the presence of small amounts of blood in the fæces is a valuable link in the chain of evidence of the presence or absence of an ulcer.

Occurrence.—In ulcer, as a rule, occult blood does not occur in every stool, as it does in cancer. In the acute stages, before and after visible hæmorrhage, I have often found it constantly present, but in other cases it is found irregularly, sometimes in two or three stools in succession, sometimes with quite long intervals between each appearance; thus it may appear but once a week, and especially in chronic cases; consequently, it is of much importance to examine every stool in suspected cases. In chronic ulcer it may be absent for several weeks, or even months. Its presence is always a confirmation of a diagnosis which has been made from other symptoms, but it is of special value in the following circumstances. First, The differentiation of true ulcer from stomach pain due to neurosis, especially when the latter is accompanied by hyperacidity. Second, in the recognition of chronic gastric ulcer. This form of ulcer is apparently often in the condition known as latent, without any of the usual clinical symptoms, except a more or less severe anæmia and occasional occult hæmorrhages in the fæces. Hartman reports seven such cases. I, myself, have seen two.

CASE I.—A man with a history of duodenal ulcer two years previously with hyperacidity, pain and visible hæmorrhage from the bowel. When he consulted me he had a hæmoglobin of 70 per cent., without symptoms referable to his intestinal tract. There was no pain nor increase in hydrochloric acid. There was a slight tenderness above the umbilicus with indefinite symptoms of indigestion. Examination of the stool showed occult blood every two or three days. The case was considered to be one of chronic ulcer of the duodenum, with secondary anæmia produced by gradual leaking of blood from the ulcer. Under rest and proper diet, the blood disappeared from the stool, and the hæmoglobin and weight returned to normal.

CASE II.—A woman of 56 years of age, with a history of a large gastric hæmorrhage with epigastric pain 10 months before. During the attack of bleeding from the stomach, she had had severe epigastric pain and vomiting of very sour material. She had been entirely free from epigastric symptoms in the interval and at the time when she came under observation the only suggestion of ulcer was an indefinite sense of soreness in the epigastrium and slight tenderness in the same region. She was very anæmic, with her hæmoglobin 60 per cent. Occult blood was found several times at intervals of four or five days while she was on a milk diet. Under absolute rest and milk diet, blood disappeared from the stool and the hæmoglobin improved rapidly. I am inclined to think that the test for occult blood in this case was of value therapeutically, as well as diagnostically, and that a recurrence of gastric hæmorrhage was prevented by the recognition of occult hæmorrhage and its prompt treatment.

Therapeutical and prognostic value.—The test for occult blood can be used to control and determine the length of the various periods of medical treatment of ulcer. The bleeding should stop within a week after the patient is placed on a milk diet and rest in bed. As soon as blood disappears from the stools, provided the other symptoms are favorable,

* Part of a "symposium" on Gastric Diseases. Read at the meeting of the Section in General Medicine of the College of Physicians of Philadelphia, November 13, 1905.

the diet may be increased. If bleeding recurs during the period of increase in diet, it indicates that the change is being made too rapidly. Persistent recurrence of hæmorrhage, when the change from liquid to solid food has been tried a number of times, would indicate that the ulcer will not heal with medical treatment and that surgical intervention is required. The following case is an instance of this condition:

CASE III.—Female, aged 24, white. She has been under observation in the medical ward of the Presbyterian Hospital for the past year and a half. There had been attacks of pain and tenderness in the stomach and vomiting of blood and blood in the stool whenever she had been put upon solid food. She is comfortable when she is at rest and on liquid diet. Sometimes after her attacks of pain, occult blood has been found in the fæces without vomiting. On admission, her hæmoglobin was but 50 per cent. She has improved to a certain point, is still anæmic and has not entirely regained her flesh and strength. I am glad to say that she has at last consented to an exploratory operation.

The persistence of bleeding under a strict milk diet would seem to be, and probably is, a bad prognostic sign, although its exact significance is not yet clearly understood and should be a subject for a further investigation. Boas says in this connection: "I have often observed that the persistence of hæmorrhage while the patient is upon a strict milk diet is almost always an indication that proper healing of the ulcer will not take place. When bleeding recurs in this manner in people beyond middle age, development of cancer upon the ulcer must always be suspected. This is in accord with my earlier observation that carcinoma developing upon the floor of an ulcer is always accompanied by a tendency to frequently recurring hæmorrhage." I have not had an opportunity to test the truth of this statement of Boas. I can only mention a case which shows that recurrent hæmorrhage while the patient is on a milk diet is not always of serious import:

CASE IV.—Female, white, aged 40 years. Patient has had four attacks of vomiting and blood in the stools during the last four months; anæmia is extreme; epigastric pain and tenderness are present. During the first period, lasting eight days, with rectal feeding, three positive tests for occult blood were made. In the second period, lasting fifteen days, raw eggs and milk were given by mouth; five positive tests were made, the last on the last day of the period, namely, 23 days after the cure was commenced. There was great improvement in the blood and nutrition, and finally, complete recovery.

In conclusion and review, the conditions in which the test for occult blood in the fæces will be of prognostic and therapeutical value in the course of gastric ulcer are as follows:

First, to determine the length of the various periods of the medical treatment of ulcer.

Second, to detect the tendency to bleeding during the course of gastric ulcer and by appropriate medical and surgical measures to anticipate and prevent serious hæmorrhage.

Third, to determine when the medical treatment may be considered to have failed and surgical treatment is indicated.

Fourth, perhaps the test may prove helpful under

certain circumstances, in detecting the development of a cancer upon the floor of an ulcer.

CORNER OF FORTIETH AND LOCUST STREET.

THE SHARP CURETTE WITHIN THE UTERUS.

By BYRON ROBINSON, M. D.,

CHICAGO.

It is said, Récamier invented the sharp curette in 1843. In the realm of gynæcological surgery no more cruel and dangerous instrument has been invented. It is cruel because it inflicts untold damage and misery on the genital tract and adjacent pelvic structures as well as causing numerous deaths without accomplishing relative benefit. In general, curettage of the uterus is as irrational, unnecessary, and harmful as it would be to curette the nasal mucosa; for both uterine mucosa and nasal mucosa resemble each other as possessing no submucosa, no barriers, to check infectious invasion like the intestine. A distinction should be made between the sharp curette and the dull loop curette. Removing some placental débris with a looped curette is not curettage any more than removing the débris with the finger. This article refers to uterine curettage by the sharp curette.

The object of the curette.—The object of the curette is: 1, To remove portions of intrauterine tissue for diagnostic purpose (carcinoma, sarcoma, endometritic granulations); 2, to remove placental débris (abortion, miscarriage, labor); 3, to remove abnormal endometrium. One object of uterine curettage is to destroy the surface of the endometrium and produce a new one, an endometrium histologically and physiologically normal. To accomplish this completely the old surface endometrium must be entirely removed which anyone who experiments with a curette knows it to be physically impossible. The operator must expect that the surface of the endometrium will be removed by the curette whence, if no sepsis occurs, the new surface endometrium will be reproduced in about a month. However, practice with the curette demonstrates the futility of effort. Anyone can test the effects of the curette on an extirpated uterus by exposing the endometrium by a longitudinal incision through the uterine wall, whence by vigorous application of the sharp curette ragged, irregular linear wounds alone appear in the endometrium, while three fourths of the endometrium remains intact. By practising with the sharp curette on the endometrium in situ, it is evident to the naked eye that only linear fissures, irregular abrasions or ragged frayed wounds of the endometrium are produced by the curette, large portions of the endometrium remaining intact.

Nature of the endometrium.—The endometrium is a lymphoid structure. It is not an ordinary mucosa. It has an age relation. In pueritas it is in a state of quietude, merely existing, with a limited blood supply. In pubertas and menstrual life it springs into periodic activity nourished by an abundant blood supply. In this life period it has its cycle of nidation and denidation. In

senescence the endometrium returns to the quiescence of pueritas with a gradually diminishing blood supply.

The endometrium suffers some solution of continuity periodically at menstruation, which is not characteristic of other mucosæ, however, the endometrial defect repairs itself, whereas an ordinary mucosa once destroyed does not perfectly reproduce. The endometrium sits directly on the myometrium with no intervening submucosa, to check endometrial infectious invasion, hence uterine curettage is peculiarly dangerous, first and foremost because it produces wounds, atria for infection in a spongy lymph bed susceptible to infection and germ culture.

Indications for uterine curettage.—There are no general established rules for uterine curettage, as there are none to indicate the Alexander operations; both curettage and Alexander operations are stumbling blocks in gynæcology. They are both in general doubtful operations. And when in doubt as to the indications for curettage the wise practitioner will omit the operation. It requires the best head and the finest skill to select properly a case for curettage. It requires the broadest knowledge of pathological conditions and operative technique to avoid damaging sequelæ. The experienced gynæcologist notes the contraindications and risks in curetting rather than its expected benefit, especially if the myometrium, oviducts, or peritonæum possess degrees of pathological conditions.

In over twenty years of special labors in gynæcology I have found little use for the curette in endometritis. In the acutely affected uterus the curette is dangerous and multiplies wounds for swiftly spreading infection. The endometritis for which a curette is required is largely a myth. How many recognized gynæcologists can in consultation present in a concrete subject sufficient reasons (except for diagnosis), to perform curettage safely, either to their own satisfaction or that of their colleagues? In my own experience of twenty years devoted exclusively to gynæcological and abdominal diseases I have found that the curette has done far more damage than benefit; in fact, I have made a living from the damage inflicted on patients by the curette in the hands of colleagues. Curettage is the direct cause of vast numbers of subjects' possessing chronic metritis, salpingitis, and pelvic peritoneal exudates, necessitating long suffering, sterility, or removal of uterus or oviducts. In short, it is my opinion that the curette should be employed only after a consultation with an experienced specialist.

Chronic endometritis.—The curette may be indicated in chronic plastic endometritis, which is usually accompanied with hypertrophic myometritis. However, I think I have secured more favorable results from a mixture of 95 per cent. of carbolic acid and iodine. Chronic subinvolution really consists of endometritis, and myometritis is more favorably treated with dilatation and 95 per cent. of carbolic acid and iodine than with a sharp curette.

Contraindications of curettage.—The curette should not be used in subjects with fixed uterus

from organized peritoneal exudates. It is not indicated in myometritis and salpingitis.

Puerperium.—The sharp curette is not indicated in the puerperium (abortion, miscarriage, labor) and untold damage is frequently done by curetting puerperal uteri not only by aiding to distribute sepsis through oviducts and genital lymphatics, but by its trauma on the thrombi in the uterine veins or sinuses at the placental site, fracturing, displacing them, and starting them on their journey as emboli. The finger or dull loop safely removes placental débris. A whole fœtus may escape the curette—but not the finger.

Recently I was called to a patient where a young practitioner had employed the sharp curette on the second day subsequent to labor, and in a few hours the patient became attacked with pain in the left chest—it was a pulmonary embolus fragmented by the curette from the placental site which sent her swiftly downwards, dying of pulmonary abscess in six weeks. I was also recently called to a puerperal patient who was curetted on the third day by a general practitioner, and she was shortly attacked with rapid respiration—40 per minute—some six hours later. My diagnosis was nonseptic pulmonary emboli. She breathed 35 to 40 times per minute for four weeks, finally recovering. The sharp curette should not be employed in the puerperium from the possibility of fragmented thrombi in the uterine placental site producing emboli.

Abortions should not be treated with the sharp curette, but it is more favorable to evacuate the uterine contents with the finger or dull metal loop. The sharp curette is liable to disturb the thrombi in the uterine veins at the placental site or in the plexus pampiniformis. Embolism must not be forgotten in the puerperium. It requires more than mere scientific instruction to induce many physicians to abstain from irrational, unnecessary, and harmful operations with fame and fee in view. The opposition of his medical colleagues to such operations alone can check them.

Sterility.—Routine curettage for sterility is as irrational as it is unsuccessful and dangerous, for frequently one observes the condition of the patient is worse—some months—after the operation. The existing pathological conditions are exacerbated. A patient recently brought to my office is a typical subject of repeated damage from uterine curettage. She is an unmarried nullipara and suffered dysmenorrhœa for three years. She was curetted three times in three years. Her genital organs are now surrounded and fixed in organized pelvic peritoneal exudates, and besides the operator in dilating the atrophied cervix lacerated it and infection has spread to the paracervical cellular tissue, producing cellulitis which has contracted and drawn the cervix an inch from the middle line. She is now not only suffering from the original dysmenorrhœa, but also from myometritis, salpingitis, pelvic peritonitis, and cellulitis. Practically this patient's genitals have been ruined by the curette. She said herself she was in pain for some time after each curettage.

Atropic myometritis (either defective in development or atrophic from inflammation).—The

sharp curette is practically a failure in atrophic myometritis, which is a prevalent disease. The curettage for this disease is accompanied by two damaging effects, viz.: the uterine dilatation causes: (a) Wounds, atria of infection not only in the endometrium, but in the myometrium; (b) the curette produces hundreds of more wounds, more atria for infection in the endometrium.

Septic endometritis contraindicates the curette; it endangers not only exacerbation, but additional affection.

Gonorrhæal endometritis should not be treated by curettage. It not only facilitates the distribution of the gonococcus, but also the wounds created by the curette facilitate the growth and distribution of streptococcus and staphylococcus (especially in the peritoneal cavity). Acutely infected genitals absolutely contraindicate the use of the curette.

The abuse of the curette may be noted in: (a) Puerperal subjects (abortion, miscarriage, labor), distribution of infection and emboli; (b) non-development and atrophic myometritis (dysmenorrhœa); (c) in sterility; (d) in uterine myomata (hæmorrhage); (e) endometritis (gonococcus, streptococcus, staphylococcus); (f) in uterine perforation. There is doubtless no instrument in the medical profession that has been so extensively misused and abused as the curette. It is used for the mildest endometritis, or uterine catarrh, as well as for the most desperate pelvic disease, hæmorrhage, sepsis, or pain—in fact, practically I know of no gynæcologic condition to which the curette has not been applied. The indiscriminate use of the curette has been the cause of perhaps more misery than any other factor in gynæcology and not a few deaths. Its advocates do not make a diagnosis, yet these "uterine scrapers" aspire to become known as operators. They do not possess the training and skill to make an accurate diagnosis, yet these "uterine scrapers" assume popular surgical airs and claim large fees for surgical procedures which should remain unperformed. I am sorry to admit that there is a very small minority, fortunately, of gynæcologists in charge of gynæcological hospitals who from avarice or ignorance of the real pathological condition are known as inveterate "curetters." Practically gynæcologists measure the utility of a hospital by the limited number of curettements annually performed. There is no operation in gynæcology that requires more skill, knowledge of pathological conditions, or extensive experience than curettage.

The reason the amateur may not damage the woman in curettage is that generally she assumes the bed for a time, i. e., she secures anatomical and physiological rest for a short time. Also the operation was performed aseptically. It should be remembered that it is not the sepsis which the operating introduces that subsequently damages the patient, it is the wound or atria of infection that he inflicts on the genitals and the existing sepsis that he exacerbates. The genital tract is a potential field with vast possibilities of latent sleeping germs, of germ culture with no submucosa to protect its delicate numerous lymph channels and even possessing direct patent chan-

nels to carry infection directly to the lymph stomata of the peritonæum. The injuries and trauma of the traction forceps, of the dilator and curette in this surgical procedure are profound on the genital tract, a vast field abundantly rich in lymph and bloodvessels accompanied by recurrent congestions with culture pabulum, to revive quiescent or latent germs in ancient wounds. The saddest remark that the practitioner can make is that he curetted "thoroughly" the basis of trauma and subsequent infection. The unwise practitioner engrafts the consequences of a dangerous operation on the genital tract when it had reached the verge of resistance, and the trauma, wounds of dilating, lesions of curetting, the unnecessary violent use of the traction forceps and the coarse manipulation of the genitals could result in disaster only. It is not infrequent to hear some routine "curetter" announce with apparent satisfaction that no evil result follows his curettage. If he curettes frequently, as some general practitioners do, he is a defective observer or something worse.

The evil results of the curette are frequent and multiple. The limited good that the curette has done in cases where it is rationally indicated is far outbalanced by its evil consequence and abuse. Clinical experience and direct personal observation confirm the general harm and disasters of sharp curettage of the uterus. There is no gynæcological instrument except the uterine sound that has been so extensively and badly misused as the curette. With some unthinking physicians there is no pelvic disease so grave as to bar its use and no condition so mild as to prohibit its application. The curette has spread more infection than any instrument except the sound.

It has probably caused more suffering and death than any other gynæcological instrument. The strongest advocates of the curette are generally the most irresponsible surgeons who study their patients little, and are of the pronounced operative type. In curettage, dilatation of the uterus is generally a preliminary operation and the dilator produces hundreds of wounds, atria for infection, not only in the endometrium, but also in the myometrium. Few uteri can be dilated without causing laceration, new wounds for infectious invasion. A gynæcologist of reputation will be able to make a fair living from the disasters following curettage, especially from the general surgeon or practitioner who curettes *thoroughly*, which in all probability means that he has so forcibly and violently dragged the internal genitals with traction forceps through the vagina that all infective pelvic foci that may be located in the pelvis are traumatized, stirred to exacerbation.

I have observed physicians forcibly drag the uterus with traction forceps through the pudendum and curette it as one would curette a bone. I know a celebrated gynæcologist who curetted a patient, exacerbating a chronic septic dépôt. She suffered from an immediate attack of septic peritonitis for which a peritonotomy was performed a few days later with fatal results. If a trained gynæcologist errs in the dangerous results of curettage, what about the mistakes of the general

practitioner or general surgeon, unfamiliar with the pathological conditions of the pelvis? I know of a general practitioner who curetted a patient for hæmorrhage and sent her to the hospital the next day, where the patient expelled a several inch long fœtus. I know an excellent general surgeon who curetted a uterus of some two months' gestation, and the patient was dangerously ill for many months. Unfortunately the practitioner (and even the gynæcologist) repeats the curettage of the patient if she does not become well from the first. He neglects to palpate the peritoneal exudates that his first curettage produced and the result of the second curettage is doubly worse than the first. Injury is added to insult and the patient suffers from malpractice.

Frequency.—There is no gynæcological operation performed so frequently by the general practitioner and general surgeon as curettage, and it should be performed relatively the least of all gynæcological procedures. The apparent simplicity, security, and innocence of uterine curettage have induced its excessive use of amateurs and general practitioners without proper indication. The employment of the curette for *diagnosis* is useful, especially for microscopical segments of the endometrium. The mounted endometrium section present the most brilliant views of the endometrial elements, allowing malignancy to be determined.

The damaging results of uterine curettage are: Myometritis, salpingitis, peritonitis, cellulitis, sterility, perforation—in short, infectious invasion is started on its journey through the oviducts into the peritonæum and through the myometrial lymphatics. The curette produces numerous endometrial wounds, atria of infectious invasion. The endometrium is a rich bed, luxuriant medium for bacterial growth, not only for the existing endometritis and salpingitis and pelvic peritonitis, but for myometritis. The uterus possesses no submucosa to check bacterial invasion, hence endometritis rapidly becomes myometritis. How often do we hear superficial observing physicians assert that if curettage be performed it should be done thoroughly, which means trauma and infection. This of course results in more endometrial atria for bacterial growth and consequent wider infectious invasion in the genital tract and peritonæum. The gynæcologist of experience can well measure the scientific gynæcology executed in any hospital by the extent of curettage and number of hysteropexies recorded—both procedures sad and chagrinning efforts of rational progress.

It is natural to expect cicatrices to follow wounds of any tissue, not excepting the endometrium. No investigations of regenerated endometrium subsequent to curettage are at hand; however, the story of cicatrices subsequent to uterine curettage is yet to be told in the affirmative.

Conclusions as regards uterine curettage.—Practically sixty per cent. of uterine curettage is unsuccessful. Considerable curettage is damaging, some are even fatal. The damaging results of curettage are myometritis, salpingitis, peritonitis, cellulitis, sterility, perforation—in short, the distribution of infection. Uterine curettage has pro-

duced more damage than benefit. Curettage produces relief in about twenty-five per cent. only of atrophic and maldeveloped uterus. The damage inflicted by curettage on the other seventy-five per cent. overbalances the relief secured by the twenty-five per cent. The relief secured by curettage in subjects of anæmia, neurosis, malnutrition is largely due to the preparatory and subsequent operative treatment, the anatomical and physiological rest, and the favorable mental impression on the patient. Some of the damaging effects of curettage must be credited to the usual accompanying uterine dilatation and some to the trauma of the traction forceps. There are no recognized standard rules for uterine curettage. There is no operation in gynæcology that requires greater skill, knowledge of pathological conditions, or extensive experience than curettage.

Uterine curettage is indicated in an extremely limited number of subjects. The chief use of the sharp curette in gynæcology should be for diagnostic purposes, and the mounted fragments of the endometrium present the most brilliant of microscopical views. The employment of the sharp curette on the endometrium is as irrational, harmful, and unnecessary as it would be on the nasal mucosa, for both nasal mucosa and endometrium possess no submucosa. Trauma and infection act similarly on both mucosæ. Does the specialist in nose and throat curette the nasal mucosæ? The apparent simplicity, security, and innocence of uterine curettage have induced excessive use and abuse by general practitioners, amateurs, and general surgeons without proper indications.

The abuse and misuse of the curette may be observed in: (a) Puerperal subjects (abortion, miscarriage, labor) distributing infection and emboli; (b) nondevelopment and atrophic uteri (inflicting wounds, atria for the distribution of infection); (c) in uterine myomata (hæmorrhage and producing wounds for infection); (d) in sterility (inflicting wounds for the distribution of infection); (e) in endometritis (gonococcus, streptococcus, staphylococcus), producing wounds which exacerbate and distribute the existing infection; (f) in uterine perforation.

It should be remembered that in uterine curettage the chief danger is not that the operator may introduce sepsis during the operation, but that the damage due to the wounds inflicted will give rise to atria of infection and the existing sepsis that he exacerbates. The employment of the sharp curette in the uterus has caused more suffering and death than any other gynæcological instrument. The sharp curette is the most dangerous and cruel of gynæcological instruments. It is cruel, because it inflicts untold suffering. It is dangerous, because it inflicts on the adjacent and genital visceral tracts acute and chronic disease with sterility and occasionally death. The object of the curette is to produce a new surface endometrium by destroying the surface of the old one. The method is too dangerous and too risky. The nose and throat specialist does not try nasal curettage to speculate what might happen after the operation. Contracting, distorting cicatrices of the endometrium subsequent to curettage of a

damaging character should be expected. Practically the curette has done more harm than good.

100 STATE STREET.

RUPTURE OF THE SYMPHYSIS PUBIS, WITH A REPORT OF A CASE AND DESCRIPTION OF A METHOD FOR ITS REPAIR.

By THOMAS B. EASTMAN, M. D.,
INDIANAPOLIS, IND.

Although rupture of the symphysis pubis has been recognized as an obstetric accident since the time of the earliest writers on the subject, and although it occurs not infrequently, the paucity of the literature, especially in the English language, suggests the conclusion that the accident is not always recognized and that its importance as an indication of nature's manner of terminating certain difficult labors is not appreciated.

In 1876, Ahlfeld had collected 100 cases, to which number Schauta, in 1889, added 14. Since Schauta's report, DeLee, Braun von Fernwald, Himmelsbach, Renny, Kayser, Ayers, Bäcker, and others have added to the list until it now numbers something over 150 cases.

Rupture may occur spontaneously, but Hava-jewicz, quoted by Himmelsbach, states that out of 23 cases, 16 occurred as the result of forceps delivery. Renny reports three cases, in one of which forceps was used, while in the other two delivery was spontaneous. Of DeLee's four cases, two deliveries were spontaneous, one was instrumental, while the fourth was a difficult delivery by podalic version. Ayers reports two cases occurring in the practice of Dr. W. Gill Wylie, both of which occurred as the result of forceps delivery. In Himmelsbach's case the delivery was spontaneous. Kayser reports a case in which the patient had a normal pelvis and a living child was delivered with forceps. Hartwig and Glenn have each reported a case of spontaneous rupture. The case reported by Bäcker was that of a primipara, 21 years old, who had been in labor nine days before delivery with forceps. Rudaux collected 98 cases, 25 of which occurred spontaneously.

These figures would seem to show that spontaneous rupture is relatively not so rare as has been indicated by various authors, as, for instance, De Lee, who says "spontaneous ruptures are especially rare, while cases where the bones have separated during forced operative deliveries are not so infrequent." While rupture ordinarily takes place in the interosseous cartilages and ligaments, or between one articular surface and its apposed cartilage, it may, and doubtless often does, occur as a fracture of one of the pubic bones, as in a case reported by Ayers.

The normal pelvis is a rigid body. To what extent this rigidity gives way to relaxation in pregnancy has been a source of argument for centuries. That there is at least some motion at the pubic articulation can be hardly a matter of doubt, and that the normal swelling and softening of the pubic and sacroiliac joints exaggerated into a pathological condition, as described by Parvin, may bear an im-

portant relation in the ætiology of this accident, is at once evident. The pubic is more frequently affected than either of the sacroiliac joints, which greater frequency may be only apparent as recognition of the rupture in the latter joints is less likely and diagnosis much more difficult. The disorder usually occurs in the latter half of pregnancy, generally in the last two months, but Moreau, quoted by Parvin, mentions a case in which the condition began in the second month. Parvin states that it is impossible for it to occur in natural delivery or in ordinary obstetric operations unless there be an anterior lesion.

Snelling says, "I think it is not forcing a conclusion to regard it as proved from what has been advanced, than an uncertain, varying degree of relaxation or ramollissement does obtain in a very large number of cases, in the pregnant and puerperal condition, of a physiological and benign character, and entirely consistent with health, and that it is to the excess alone of this condition that the pathological results referred to are due. The ligaments become saturated with serum and lose their firm and resilient qualities; the synovia is greatly increased and presses the bones asunder; the pelvis becomes incapable of sustaining the weight of the body, and so gradually yields to the weight above; or some slight and insignificant movement of the patient suffices to precipitate the whole train of symptoms suddenly and at once. I am convinced that more such cases occur than is generally believed."

According to Luschka a synovial membrane is found on the inner surface of the so called symphysis ossium pubis in woman, in which are discovered a collection of round cells only, with no true epithelium. This imperfect articulation may be developed during pregnancy so as to form a complete joint, by which process these cellular elements are considerably increased.

Glenn states that inflammation of this articulation generally begins at the center and spreads towards the periphery, being accompanied by increased secretion from the synovial membrane, according to the former view; or from a serous infiltration and consequent relaxation of the tissues of the symphysis due to mechanical obstruction to the return of the venous blood by the pressure of the presenting part, if we believe the more modern theory. By this secretion the bones are forced apart, and if the inflammation should go on to suppuration, the cartilage is denuded, possibly destroyed, caries attacks the bone, an abscess is formed in the joint, and the pus, burrowing deeply through the infiltrated tissues, finds its way to the surface either at the mons Veneris or it may be on the thigh or gluteal region.

Osteomalacia is regarded as the more common predisposing cause by a number of authors. Thirty years ago, Ahlfeld wrote, "in the osteomalacic pelvis we have a very common predisposing cause of rupture. In this condition, it is not alone the changes in the bone substance itself which favor the separation of the symphysis, but the form of the osteomalacic pelvis as well. As a result of the pathological process, the connection between the cartilages of the symphysis and the bones is so loosened that an insufficient resistance is offered against the spreading force of the head. It is

known that in the osteomalacic pelvis fracture of the bones may occur without involving the articulations. In those cases in which an inflammation of the pelvic articulations, either acute or chronic, already exists, an almost inconsiderable force is frequently sufficient to effect a separation of the symphysis. Naturally, then, less depends on the form of the pelvis, since inflammation of the articulations may occur in pelvis of all forms. On the other hand, if a previous inflammation does not enter into the condition it is necessary, in order to understand the conditions leading up to the rupture, to consider above everything else the form of the pelvis. Rupture occurs most often as the result of a generally contracted pelvis, more often than as a result of osteomalacia. The narrowed transverse diameter is common to both the osteomalacic and justo-minor pelvis. Herein lies the most important cause of the separation. The downward pressing part, generally the head, wedges itself into the narrow transverse diameter and there results a bursting of the symphysis, and secondarily, a rupture of one or both of the sacroiliac synchondroses since space cannot be created by the changing form as in the osteomalacic pelvis."

So far as its liability to occur in the rachitic pelvis is concerned, the fact that such pelvis are ordinarily much thicker and firmer than the ordinary pelvis, renders such liability rather remote. Rupture can only occur, according to Ahlfeld, in a rachitic pelvis when a violent force exerts itself in an unfavorable direction, especially against the symphysis. The ordinary labor pain alone cannot bring about this separation. If the rachitic pelvis is at the same time generally contracted, there are at least partly created those conditions which again render possible a separation. In the rachitic pelvis, the disrupting force is exerted particularly in the direction of the anteroposterior diameter, a direction of force not likely to result in the rupture of the symphysis. Still less are the synchondroses primarily endangered.

According to DeLee, the shape and size of the pelvis have much to do with the likelihood of separation of the articulations. Since the disrupting force is that of a wedge, and the pubic joint will give most to a force which pulls the bones laterally one from the other, it follows that those pelvis are most susceptible to the injury where the head can expand the sides. The generally contracted pelvis is the one usually found in these cases. In the flat pelvis, on the contrary, where the narrowing is in the anteroposterior diameter, the head needing no expansion of the sides, the rupture rarely takes place, though in many of these cases very powerful efforts at delivery are made. These may result in fracture of the bones as often as rupture of the joint. The bones of the rachitic pelvis are often stronger and thicker than those of a normal skeleton, but cases are not few where the opposite is true. Funnel-shaped and kyphotic, laterally contracted pelvis should be particularly liable to rupture, but, probably owing to the rarity of these visitations, the reported cases are few.

Scanzoni says, "Rupture occurs especially in persons who have had pregnancies following one another in rapid succession. Many were persons with

narrow pelvis, presenting a repetition of a normal phenomenon in many classes of animals, where the size of the foetus requires a considerable separation of the bones and an enlargement of the pelvic apertures. In these cases, it seems as if the uterus developed in the narrow pelvis and hindered in its ascent, worked with such force toward the periphery of the pelvis, as to contribute in an important manner to separation of the bones, through the relaxation of the cartilage and ligaments. We have frequently seen this condition in narrow pelvis reaching such a degree that even moderate traction with forceps has caused a rupture of these connections, and a separation of the pubic bones. We have likewise observed that puerperal inflammations of the pelvic bones are especially frequent in persons with contracted pelvis."

A joint, the seat of tuberculous disease, or eroded by neoplasm, is likely to rupture during labor. Improper manipulation of forceps results occasionally in rupture of a normal pelvis.

There can be little doubt that no one condition or circumstance is responsible for this description. It is unreasonable to suppose that the expulsive forces engaged in labor are sufficient to disrupt the firm pelvic articular ligaments unless some pathological conditions exist. Bearing in mind the firmness of the pelvic girdle as compared with the pliability of the head and the softness of the tissues of the foetus, there has never been sufficient explanation as to why whatever injury results from a narrow or deformed passageway does not fall upon the child rather than upon the structure of the bony pelvis. The latter must indeed be weak before it suffers rupture.

Given a large head, a badly engaging head, a prolonged labor, an unskillful forceps delivery, or all present in a single case, with a pelvis the ligaments of which have undergone radical changes, a malformed pelvis, or one the articulations of which are the seat of inflammatory changes, or malignant new growth, and we have a combination of conditions and circumstances very likely to result in rupture.

In so far as the diagnosis and the symptoms which lead up to it are concerned, it is the writer's belief as intimated in the beginning of this paper, that the symptoms are either not appreciated or are confused with those of other conditions and the diagnosis, therefore, not made. If, as in the case which the writer is about to report, the symphysis suddenly gives way with a noise loud enough to be heard across the room, followed immediately by pain upon movement definitely located at the symphysis, the diagnosis can almost be made by a layman.

However, in the case of the so called silent rupture, particularly if the patient be anæsthetized, the accident is ordinarily overlooked, especially by those obstetricians who do not make a careful examination after the completion of the third stage while the pain and distress is ascribed to the more or less to be expected bruising of the parts. It is not, however, until the patient attempts to move that the full import of the injury is realized. Any attempt to sit up produces a grating, scraping sensation accompanied by great pain in the region of the symphysis and often at the right hip. The patient

lies flat on her back with her limbs rotated outward. If the bladder or urethra is injured, the condition assumes at once a more serious aspect. In cases where infection supervenes, its onset is generally marked by a severe chill followed by a sharp rise in temperature.

In a case of spontaneous rupture after the patient's fourth labor, Glenn found little out of the ordinary except that the patient complained of inability to move her legs and of pain in the region of the symphysis. She could not move her limbs without pain and catheterization was necessary. Examination revealed a normal genital tract with the exception of small ecchymoses in the centre of the vestibule. On the third day she developed a temperature of 100.2 at which point it remained until the ninth day, when it suddenly increased to 104 degrees, pulse 140, followed by chills and death in fifteen days after confinement. The autopsy revealed a ruptured symphysis with marked suppuration of a tuberculous character between the cartilaginous discs.

In one of Wylie's cases, reported by Ayers, the patient was delivered by two strong doctors using the forceps. They were unable to find the urethra. Patient could not pass her urine. She had a rapid pulse, temperature 105 degrees F. One or two fingers could be passed up between the bones. There was complete fracture through the left pubic bone a little distance from the joint. Dr. Wylie found the urethra and drew off about a quart of bloody urine. The patient had septic peritonitis and died in twenty-four hours. Great force was used with the forceps. The patient was a primipara nineteen years of age.

Hartwig reports the following case: "Last winter I was called to see a robust woman two weeks after confinement with a swelling in the pubic region. The forceps had not been used, and she stated that she had not been torn apart. Evidently the attending physician had his fingers in the vagina when the rupture occurred. I incised the abscess, which I found and introduced my finger between the separated ends of the symphysis. The cartilage seemed destroyed. A few days of drainage and a band around the hips sufficed to effect a cure. About six weeks later the patient was up and around. The woman's pelvis was somewhat narrow, as well as I remember. In two previous confinements in which I attended her, the foetuses were expelled only after the most formidable pains, and in one I applied the forceps."

Oelschläger has reported the case of a primipara, twenty years old, in which with the onset of labor pains two eclamptic attacks occurred in quick succession. The lower extremities were œdematous, and the urine contained a small amount of albumin. The promontory of the sacrum could be touched with two fingers introduced into the vagina. The head was quite high in the pelvis, and but slowly followed in the grasp of the forceps, a not excessive degree of traction being exercised. As the head began to rotate in the small pelvis, a crack was distinctly heard. Examination disclosed a separation of 1.15 inches in the situation of the symphysis pubis, and the delivery of a living child weighing nine pounds was soon readily effected.

If the patient gets up and tries to walk, she finds it exceedingly difficult to control her movements and complains of a feeling of insecurity and "gone-ness" about her pelvis. These sensations have doubtless been ascribed by attendants as being due to conditions incident to childbirth, such as prolapsus uteri and the weight of the congested parts.

If the case is a recent one, any manipulation of the parts produces excruciating pain. The abnor-

mal motion is best detected as follows. Place both thumbs in the vagina with the fingers of each hand firmly over the pubes while an assistant having flexed the thighs, separates and approximates alternately the knees. The separation and movement of the pubic bones upon each other is plainly felt and not infrequently the grating noise is heard. Little will be learned by simple manipulation of the parts with the hands, since only by great effort on the part of the examiner can the bones be separated and advantage should be taken of the leverage afforded by the femurs.

The noninfected case terminates in one of the following ways: (1) Union of the separated bones may take place during the lying-in period and the existence of such rupture is never suspected; (2) the patient waddles around for a few months before union takes place, or; (3) union may take place at the end of several years; or, (4) not at all, unless (5) surgical relief is obtained.

In cases where infection and inflammation occur, Glenn states that the disease may terminate (1) by absorption with complete resolution and recovery in from two to three weeks; (2) in suppuration and perforation, with recovery in about six weeks; (3) in a persistent chronic relaxation of the joint, a most important point, as the condition may last for years; (4) in septicæmia and pyæmia; or (5) unfortunately but rarely with death.

In so far as treatment is concerned, it has consisted chiefly of immobilization of the pelvis to such an extent as variously devised binders of canvas or leather would afford. Plaster of Paris has been used, but in as much as it is necessary that it embrace the upper third of the femurs, it has been found impracticable as it renders the always necessary catheterization almost impossible. If after the elapse of a year, union does not take place, the best treatment consists in cutting down upon the symphysis and suturing together the separated ends.

CASE.—On October 25th, 1905, I was asked by Dr. J. W. Stewart, of Logansport, to see Mrs. L., aged twenty-seven, mother of two children. On September 17th, 1904, being pregnant for the second time, and at term, she was suddenly seized with slight labor pains. Twenty minutes after the inception of the pains, she was seized with a single terrific pain and gave birth to a nine pound child. The instant before the birth a snapping noise was heard throughout the room. Naturally on account of the precipitate character of the labor she had no attendant. Her recovery, so far as ordinary post partum conditions were concerned, was uneventful. However, upon attempting to walk, she found that she could not control her limbs and complained of a sinking sensation about her pelvis, while any considerable movement of her body produced a grating sensation at the symphysis. How this grating sound could occur in view of the presence of the gelatinous substance afterward found between the ends of the bones is a matter of conjecture, although both the patient and the members of her family insisted they had often heard it. She did not feel more secure upon one foot than upon both, as has been described as a symptom by various authors. Her first labor was without unusual incident. She was of medium size, fairly well nourished. She had small hands and feet. Upon examination after the method described above, a distinct movement was made out at the symphysis. The pelvimeter was not used, but her pelvis seemed to be normal in its diameters.

Operation.—In order to avoid a possible injury to the vessels and nerves adjacent to the clitoris, a crescent shaped incision four inches long and following the curve of the pubic arch was made. The subjacent fat was dissected away, and the anterior surface of the bodies of the pelvic bones exposed. The ends of the bones were found separated about an inch and a quarter, while the intervening space was filled with a semi-solid substance which was readily removed with the handle of the scalpel. The posterior surface of the bones was not exposed nor was the space of Retzius opened except as the removal of the intervening substance exposed it to view. The articular surfaces of the bones were well scraped. Two holes in either side were now drilled through the bone from a point on the anterior surface one half inch from the articular surface and emerging on the posterior surface one fourth inch from the articular surface. Through these apertures heavy silver wire was introduced, the parts brought together by strong pressure upon the trochanters and the wires twisted to remain. Union was perfect in thirty-six days. Catgut has been used by various operators. In view of the strain, iron wire may be preferable.

This method is in a way a modification of the method devised by Farabœuf for suturing the symphysis after symphysiotomy. However, Farabœuf and most of the writers recommend that the sutures be passed only partly through the substance of the bone, emerging in the centre of the articulation surface. In view of the very considerable strain put upon the sutures, and their resultant tendency to tear through the bone, it is evident that they cannot be inserted too firmly.

Inasmuch as there is always danger of injury to the vessels of the clitoris, the crescent shaped incision is offered as an improvement over the vertical incision to those who may see fit to perform symphysiotomy.

It is important to avoid injury to the bladder, and this method reduces this danger to a minimum.

331 NORTH DELAWARE STREET.

THE PRESENT STATUS OF SURGICAL OPERATIONS ON THE INSANE.*

By LE ROY BROUN, M. D.,

NEW YORK.

The treatment of large bodies of insane patients has undergone radical changes within late years. The physical health of the individual patient is being more closely observed. If grave pathological conditions exist cognizance is taken of such, and they are remedied whenever they interfere with the general health of the individual, knowing that aside from the right of the individual to be relieved from suffering, the resulting increased physical and nervous health of the patients will enable them to profit to the greatest extent by the special treatment directed to their mental state.

The writer's surgical work among the insane has been largely in the female department of the Manhattan State Hospital. His observations will therefore be confined to abdominal and pelvic surgery among these patients.

As to the influence of the sexual organs of woman upon her mental state, much has been written *pro* and *con* upon this subject. Kraepelin admits

a close relationship between psychic conditions and the sexual life as evinced by changes in character of the woman in the normal development and retrogression of the sexual organs, and in the altered character of the castrated. He regards it therefore comprehensive that diseases of the sexual organs may have a decided effect on psychical life and refers to the special disposition of women to become insane at the menopause. Krafft-Ebing maintains that the influence of diseased generative organs in women should not be underrated as a physical cause of insanity and gives them the following order: 1. Uterine trouble accompanied by chronic inflammatory conditions of the tuboovarian annexa. 2. Neuralgia and hyperæsthetic affections of the vagina. 3. Lacerated and eroded conditions of the cervix.

It must be borne in mind that no authority at the present day maintains that a disease of any organ is the sole cause of a mental breakdown in a patient. There must be a prior predisposition, a previous neurasthenic condition existing, in order that a disease of the sexual organs can by so reducing the patient's physical and nervous health to become the cause of developing a true psychosis.

Hergt, of Heidelberg, in 1870, wrote an excellent memoir on Woman's Diseases and Disturbances of the Mind in *Allgemeine Zeitschrift für Psychiatrie*, vol. xxvii. He cites instances of mental disturbance not showing any apparent ætiological relation to an existing disease of the pelvic organs. However, in the course of the mental disturbance abnormal symptoms arose of hallucinations, erotic and lascivious inclinations, apparently the result of an increase of the pelvic disease. A cure of the pelvic condition relieved the patients of the superimposed mental excitement. He gives as the first step in causal influence, when through a sexual disease a more or less weakened condition of the body and of the nervous system is developed, the mental resistance is lessened, and the ground is thus prepared for other more important causes.

Alexander Skene, about 1878, was invited by Dr. Shaw, then superintendent of the Kings County Insane Asylum, to study the correlation of pelvic diseases and insanity among the women of that institution. His conclusions are given in two articles—one in 1880, published in the *Archives of Medicine*—the other in 1892, read before the American Medico-Psychological Association of that year. In both of these articles he states as his conviction that diseases of the pelvic organs, though giving rise to a great variety of nervous disturbances, rarely are the cause *per se* of insanity. That the irritation and exhaustion produced by uterine and ovarian disease is simply a predisposing indirect cause and only in those who are already of a poor mental balance.

MacNaughton Jones quotes Martin, of Berlin, as stating that "healthy women do not run the risk of insanity from their sexual organs nor are they endangered as to insanity by operations upon them. Only by the presence of abnormal mental conditions do menstruation, gestation, or operations on the sexual organs cause mental instability or temporary insanity."

The frequency of some pathological pelvic condi-

* Read before the Brooklyn Medical Association.

tion existing among insane women is large. Rippling states that in the asylum under his charge in Germany thirty-three per cent. of diseased pelvic organs were found in 100 consecutive autopsies. Hergt speaks of almost 66 per cent. of diseases of the sexual organs of women being found in the autopsies for two years in the Heidelberg Institute.

Isabella Davenport, of the Illinois East Hospital for Insane, states that during 1898 to 1900, 431 female patients were admitted; of this number 387 were examined gynecologically and 361 pathological pelvic conditions were found.

Danillo reports 69 % out of 200 patients examined.
 Rohé reports 74 %
 Manton reports 81 % out of 100 patients examined.
 Hobbs reports 93 %
 Piqué reports 89 %

Anna Hutchinson, of the Manhattan State Hospital West, where my operations on the insane are being done, reports that during the year ending October, 1904, 700 women among the admissions of that year were examined by her; 543 had pathological conditions of the pelvic organs, or 77 per cent.; 157 had no disease of these organs.

Thus it is seen that in all insane asylums a large majority of the women inmates suffer in some form from a disease of the pelvic organs. The character of such disease varies from those of a more trivial nature from which no symptoms ordinarily arise, to those of a graver kind through which the unfortunate patient is a constant sufferer or by which her life may be endangered. With such facts forced upon us, it is but just that they be given such relief as would be tendered to others with similar conditions, though without mental disease. Gynecologists cannot appreciate the different phases of mental alienation; they have not had the training which would enable them to do this. No more is an alienist able to recognize that many pelvic lesions and pathological states of necessity give birth to distress and a train of nervous symptoms well known to one especially trained in this work.

It is therefore important for the general welfare of those women confined in institutions that each asylum have connected with it a gynecologist, and that active assistance be given such patients as need his attention.

It was with this end in view that Dr. Frederick Peterson, the late president of the Lunacy Board of the State of New York, warmly advocated the equipment of operating rooms and the systematic performance of such operations as should be indicated.

At this time—1902—I was requested by Dr. Emmet C. Dent, superintendent of the Manhattan State Hospital West (the female division of the Manhattan State Hospital) to take charge of the gynecological division of that institution.

All patients on entering the hospital are given a thorough physical examination, of which a full record is kept. In addition to this systematic examination, a complete pelvic and abdominal examination is made by Dr. Anna E. Hutchinson, of which a record is also made and filed. As a result of such examinations Dr. Hutchinson refers to me such patients as in her opinion may be physically benefited by some form of operation or treatment.

It is from these patients so referred that I have advised operative measures in those most needing it.

OPERATIONS FOR THE RELIEF OF THE MENTAL CONDITION.

The well recognized nervous phenomena and mental depression attendant upon diseases of the sexual organs in women have led, in years past, to efforts directed towards curing true psychosis by surgical operations. The patients selected for such measures were those whose hallucinations were of an erotic and lascivious character and in which each menstrual epoch brought an exaggeration of such ideas, the supposition being that an ablation of the ovaries would remove the sexual desires and prevent the periodic excitement attendant upon the menstruation, hence cure the psychosis. Such operations were done with varying results.

Kroemer, in an article appearing in the *Zeitschrift für Psychiatrie*, of 1896, seems to have collected all of the reported cases of castration for insanity up to the time of his writing, to the number of 300, of which he claims that in 70 per cent. the results were favorable either in complete cures or ameliorations.

The late Dr. Rohé, superintendent of the Second Hospital for the Insane of Maryland, reported before the British Medical Association, in 1897, the results of his work in this line, which consisted of 34 operations in 32 of which the tubes and ovaries were removed. His operations extended over six years and gave him a result of 11 mental cures and nine mental improvements. The indication for a removal of the ovaries with Rohé was hallucinations referable to the generative organs, increased at menstruation. A disease of the ovaries was not a prerequisite.

Hobbs, of the London, Ontario, Hospital, of Canada, reported at the same meeting of the British Association, 80 gynecological operations with 30 mental cures and 18 mental improvements. The operations of Hobbs seem to have been regulated more by the diseased condition present, though in instances of the removal of the uterine annexa it appears that the presence of a cystic disease of the ovaries was a sufficient cause for their ablation.

Up to the appearance of these two papers little attention was given to this subject by alienists, either for or against such a procedure. The results reported by these two alienists were, however, so much more favorable than those obtained by means of the recognized line of moral and therapeutical treatment, as to attract the universal attention of all interested in treating mental diseases, giving rise to a number of articles upon the subject, notably one by Dr. Russell, medical superintendent of Hamilton Asylum, of Canada, who, in an article at the same meeting, strongly opposed the validity of the claims of surgery as a curative measure in insanity. He gave in support of his opinion the experiences of 120 alienists of America and Canada with whom he had corresponded upon the subject.

Shortly after two Italian alienists, Angelucci and Pierraccini, published an exhaustive thesis in opposition to surgical measures as a remedial agent for insanity. They reported 109 operations collected from various sources resulting in 17 being benefited; out of this number improved they claimed

that only five true cases of psychosis could be said to be apparently cured.

Both Rohé and Hobbs attributed their high percentage of mental cures to the removal of the diseased uterine annexa in patients in whom existed delusions referable to the pelvic organs. The radical views of these two operators have not been accepted either by surgeons or alienists. Especially is this true as to the removal of normal ovaries or those slightly cystic. Such a procedure is now unreservedly condemned by all conservative surgeons.

It is only necessary to quote an extract from a paper of Dr. Alexander Skene, read before the Medico-Psychological Association in 1892, to indicate the opinion of all gynæcologists upon this subject. He says: "The slow destructive action of the ovaries prepares the organization, as it were, for the menopause and at the same time occupies the nervous system with disturbances which come from diseased ovaries, and hence their removal is a relief to the nervous system, whereas the removal of the normal ovaries is, figuratively speaking, an outrage to the nervous system which often overwhelms it."

Raimann, in the *Chrobak's Festschrift* of 1903, presents an extensive article "On the Causal Relations Between Female Affections and Mental Disturbances." He reports in full 11 cases in which the hallucinations were referable to the pelvic organs and accentuated during menstruation. In all the tuboovarian annexa were removed though in some instances they were not diseased. There were no mental cures; in three only was there any diminution of the previous hallucinations, and in these the mental improvement was only slight. The results reported by Raimann are in accord with what would have been anticipated from a gynæcological standpoint. It is contrary to all surgical experience to expect that the removal of the normal ovaries and tubes in a woman during her active sexual life can result other than disastrously to the nervous system even in women having no mental alienation, how much more so with those who have a weakened nervous potentiality as Tomlinson admirably expresses it, or in those already insane. With hardly an exception all alienists and surgeons are now united in condemning operations performed for the sole purpose of curing a psychosis, unless in instances of traumatic insanity or of others in whom the indication is positive, as in a case reported by Raimann in which the patient had periodic attacks of mania at each menstrual period and was free from such disturbances between the periods and during pregnancy. A removal of the tubes and ovaries in this instance resulted in a permanent relief from the disturbances.

Insane patients, being as much subject to physical diseases as their more fortunate sisters, have equally as much right to be relieved. Such is now recognized and the majority of the institutions have upon their staff consulting surgeons who render such relief as needed. These unfortunates are now treated as if they were not insane, as far as their physical condition is concerned.

In this spirit the operations of the writer have been conducted. In every instance the relief of the local condition alone and the ordinary symptoms

resulting have been considered; no cognizance has been taken of the mental state excepting as it precludes for the time any form of surgical operation. In other words, no operation has been done with a direct view of its possibly affecting favorably the mental disease for which the patient has been admitted to the hospital.

While the relief of the physical suffering alone has been the object of these operations, the subsequent progress of the mental disease of these patients has been carefully noted with a desire to determine, if possible, whether the improvement of the general health through the operation has exercised a beneficial effect on the favorable progress of their mental state. Reliable conclusions upon this question are extremely difficult to draw, since so many other factors enter into the reason of the mental improvement of patients. Deductions to be decisive should be drawn from the result of systematic surgical work, extending over many years. In tabulating my own operations I have arranged them under three heads in order the better to analyze them.

As stated, no operations have been undertaken with the direct object of influencing the mental status. The physical status alone has been considered. As a result of adopting this course, fully three-fourths of the patients operated on were sufferers from forms of mental disease recognized as unfavorable and in whom little permanent progress can be made in ameliorating their mental state. The unfortunates of this class had, however, as much a claim for physical relief as those of more amenable forms of mental disease.

Two hundred and forty-two patients have been given some form of gynæcological operation which is a little less than 5 per cent. of the total number of women in the hospital during the period covering the operations. Of those operated on there have been 62 abdominal sections, 51 operations for displaced uteri, and 129 minor plastic operations. As a result of all the operations done (242) 112 patients have been physically benefited in a marked degree—107 have been noticeably improved, though not to such an extent as in the previous number. Of the remaining patients five died, of which number two deaths were attributable to the operation and three to natural causes.

When we bear in mind that in no instance was the mental condition of the patient made worse, either directly or indirectly as a result of the operations, the importance of rendering such surgical assistance as is needed to these unfortunate members of our society becomes evident. In some instances lives have been saved; in others, patients who had been bedridden or semiinvalids for a long period of time, were restored to excellent physical health. With the exception of a very small percentage all were made more useful and contented members of the community in which they live.

The statement made by some writers that operative measures for remedying diseased conditions at times aggravate the insanity of the patient is not in accord with my experience. No instance of such an occurrence exists among patients I have operated on. The same statement is made by Manton concerning his own operations in the East Michi-

gan Asylum covering a period of 20 years, and by Picqué, who has been operating for 12 years among the insane of Paris.

The rare occurrence of true psychosis following gynæcological operations upon women not previously insane, has been brought out by Rohé in the *New York Medical Journal*, of October, 1893. There he states that as a result of communicating with all the asylums of the United States and Canada he found that in the course of the ten years prior to 1893 only 25 patients had been registered in all of these asylums as having become insane after gynæcological operations. Picqué, who has devoted much attention to this phase of insanity, draws a line between intoxicative psychosis as the result of sepsis, the anæsthetic, alcohol or iodoform so largely used some years ago, and true psychosis following operations. He gives as his experience that the latter class include only old people in whom the senile change in the brain is taking place, or those mentally weak in whom there exists an intense fear and dread of operations.

This opinion, as expressed by Picqué, appears to be that of most alienists of the present day. The only cases of insanity following operations coming under my care have been those of septic origin in which a relief of the sepsis has brought about a slow but steady improvement in their mental state.

The late Dr. Bucke, in a paper read before the Medico-Psychological Association, in 1900, in analyzing the different characters of gynæcological operations and their effects, seems to find that the largest number of mental recoveries have been among those on whom operations were done for diseased ovaries and tubes. Next in order he ascribes importance to relief of diseases of the uterus, and last, to relief of injuries to the pelvic floor. Picqué, in his *Surgery Among Aliens*, cites 18 selected cases of his own, of which he reports ten mental recoveries and four mental improvements. In examining his report he does not show any larger number of improvements as resulting from removal of diseased uterine annexa, in fact the greater number follow a cure of an endometritis with an eroded and lacerated cervix.

In studying the histories of the patients upon whom I have operated, I find that of the 242 patients 138 still remain in the institution and 104 have been discharged. Of those discharged 43 are recorded as recovered mentally. Twenty of these 43 discharged as cured have had their mental recovery materially hastened as a result of the physical improvement arising from the operations done upon them. While in the majority of these patients there had been some mental improvement before the operation was done, yet in all of the 20 the psychic improvement following the operation was marked, as also was the steady progress towards mental recovery.

I would not have it inferred that this change for the better was an immediate result of the operation. Such could not be expected, nor did it exist. The marked improvement commenced generally at the time that the patient began to experience her physical improvement and the relief from her former pelvic or abdominal discomfort.

The diagnosis of the character of the mental alienation of these 20 patients whose recovery ap-

peared in a great measure to be due to an improved physical condition as a result of the surgical operation, is as follows:

Melancholia, chronic.....	5 patients.
Melancholia, acute.....	7 patients.
Mania, acute.....	4 patients.
Dementia, primary.....	4 patients.

It is seen that the beneficial effect of a surgical relief eventually resulting in a mental recovery is confined in my own experience to those patients whose mental disturbance might be largely influenced by the presence of pathological conditions.

Among my own operations it has been my effort to preserve one or both ovaries if consistent with the physical welfare of the patient. This course has been followed in accordance with the now well-established fact in pelvic surgery that the leaving of even a part of an ovary, provided that part is in a healthy state, so softens the necessary phenomena of the menopause as to relieve the patient of many of the more acute and depressing symptoms attendant thereon.

From among the 62 abdominal sections performed for various pelvic and abdominal disorders, seven had their mental recovery hastened through the beneficial physical effect of the operation. The character of these operations is as follows:

2 Myomectomies with suspension of the uterus. Mental diagnosis melancholia chronic, and mania acute.

2 Suspensions of the uterus in one of which the right ovary and tube were removed. Mental diagnosis, melancholia acute in both instances.

2 Supravaginal hysterectomies for fibromyomatous tumors of the uterus. Both ovaries and tubes were removed in each instance. Mental diagnosis, melancholia chronic and dementia primary.

1 Bassini's operation for inguinal hernia. Mental diagnosis, melancholia chronic.

It will be seen that the beneficial mental effect is not confined to abdominal operations of any special character. In five of these patients the ovaries and tubes did not require removal; in two it was necessary on account of disease to remove the annexa together with the tumor. These results are not in accord with those obtained by Hobbs, of the London, Ontario, Hospital, who states that the best results obtained in that institution were in operations on the uterine appendages. Especially is this difference perceptible when in examining the total number of abdominal sections it is seen that in 23 instances both tuboovarian annexa were removed for disease. In only two of these were there mental recoveries.

Not being an alienist, I hesitate to venture any opinions on this subject. I am, however, in full accord with those of Tomlinson in that the mental benefit accruing is not dependent on the character of operation done, but more upon the nervous potentiality of the individual patient and her ability to respond to the stimulus of increased physical health. It matters not by what character of operation or by what other means the physical well-being of the patient is restored.

Of the 129 minor plastic operations, ten of those discharged as cured began to give evidence of rapid mental improvement after recovery from the operations. While there was some improvement before the operations the rapid improvement was, however, subsequent. The only legitimate conclusion to be drawn is that the improvement was due to a re-

lief from the previous ever acting depressing nervous disturbances resulting from these injuries. The characters of these operations were, the repair of a torn perinæum together with a diseased cervix and the cure of an endometritis.

The characters of mental disease were:

Melancholia, acute.....	4 patients.
Melancholia, chronic	2 patients.
Mania, acute.....	2 patients.
Dementia, primary.....	2 patients.

Of the 51 operations for displaced uteri associated with a repair of the cervix and perinæum, where indicated, the mental recovery was hastened with three patients by the correction of the pelvic abnormalities. Upon two of these patients a curettage and a shortening of the round ligaments by Alexander's operation was done. Upon a third the peritoneal cavity was entered through an anterior vaginal incision and through this opening the round ligaments were shortened; the torn perinæum was also repaired. The mental condition of these three patients was mania acute; melancholia chronic; and dementia primary.

The length of time in which I have been conducting these operations is too short to draw conclusions of very great value. Such systematic work must extend over a number of years before positive lessons can be learned. Operations done in most of the hospitals are of a character too transitory to permit of drawing conclusions which we can feel are not subject to future modifications.

There are, however, some facts which I regard as well established.

1st. If the operation when needed has been properly done and the patient is not mutilated by an uncalled-for castration, the mental condition is never aggravated by such a procedure. This, as stated, has been the experience of Manton who has been operating for over twenty years, also that of Picqué whose operations have extended over a period of twelve years, and of myself in the entire range of my surgical work among the insane.

2nd. There exists among the patients confined in the various insane asylums many who are suffering in a quiet, uncomplaining way from pathological conditions. They have a right to be given relief irrespective of their mental state.

3rd. Under the stimulus of the improved somatic state resulting from surgical relief some of the patients show greater mental changes under the moral and therapeutical care than was shown before such relief was given. At times this improved mental state continues to one of recovery.

The primary object of surgical operations upon the insane should be to improve the physical status of the patient with one end only in view, of relieving them of physical suffering and nervous disturbances. If as a result of this relief they are mentally improved it is a sequel welcomed, and for which the surgeon feels doubly repaid.

70 WEST EIGHTY-SECOND STREET.

The Influence of Cool Baths Upon the Heart.—Strasburger states from his experiments on healthy persons that hot baths make considerable demands upon the action of the sound heart, while cool baths exercise the healthy heart only, especially is this the case in cool carbonated saline bath.—*Deutsches Archiv für klinische Medizin.*

MIGRATION OF HELMINTHS.

By HENRY PAGE, M. A., M. D.,

CAPTAIN, ASSISTANT SURGEON, UNITED STATES ARMY,
POST HOSPITAL, CAMP DARAGA, ALBAY, PHILIPPINE
ISLANDS.

In a review of an article published by Soma in the *Gazzetta degli ospedali*, of Milan, attention is called to the delayed healing of an abdominal wound, due to the emergence of ascarides through the incision, and instructions are given by this author to avoid a fatal result, as happened in the case reported.

This report calls to mind an operation I performed for suspected appendicitis upon a native Filipino in 1899, which I have neglected hitherto to record, and which I believe is worthy of brief mention.

The patient was brought to me at Corregidor Hospital, which I at that time commanded, from Bataan Province, a distance of about 20 miles, by relatives of another patient I had successfully operated upon for suppurative appendicitis.

The new patient was suffering from severe abdominal pains which had lasted for a long period, how long I could not determine, partly through his stupidity and chiefly through my inability to translate his remarks. The whole belly wall was swollen and indurated, but was not particularly tender upon pressure. An ill defined large lump was felt over the region of the appendix, and this fact suggested appendicitis, though a definite diagnosis was not made.

The incision through the abdominal wall passed through honeycomb granulation tissue to a depth of several inches. At the bottom of the wound there was eventually removed a great number of long ascarides, which were in several instances coiled in large cavities. This made me fear lest I had opened an intestine, and I put a hurried end to the operation.

Administration of hæmatoxylon showed that there was no fæcal fistula, and santonin cleared the bowel of a mass of worms, while for many days, from the tissues of the abdominal wound, worms were extracted. The patient finally recovered.

The chief point of interest in this case is the presence of the ascaris in muscular tissue. That the worms migrated through the intestine is evident, their track through the intestinal wall probably having healed by adhesions and granular deposits on the belly wall. My incision must have been quite near to this spot, and as it is very evident that no fistulous opening was present at the date of operation the life of the worms in muscular tissue had, doubtlessly, existed for a more or less extended period.

I had always been of the opinion that the ascaris could not live in muscular tissue and even a migration from the intestine to an open wound, as reported by Soma, I believe is rare.

The ascaris is the "common worm" of the Philippines, and the inhabitants of Corregidor Island are universally infected. In this Province (Albay-South Luzon) I have not seen a case of worms, even though many natives consult me. This is partially explained by the fact that they recognize the complaint and freely purchase santonin for its cure.

The local physicians tell me that hook worms have never been found here, and although sev-

eral cases have been reported in Manila, it is certain that the rice farmers are not molested by this parasite as they are in Puerto Rico.

CONGENITAL HERNIA OF THE UMBILICAL CORD, WITH REPORT OF TWO CASES.*

By E. W. MEREDITH, M. D.,

PITTSBURGH, PA.,

ASSISTANT SURGEON TO THE ALLEGHENY GENERAL HOSPITAL.

The rarity of congenital hernia of the umbilical cord together with one favorable operative result, leads me to believe that these cases are worthy of record. According to Lindfors (1) and to Buschan (3) this condition occurs about once in five thousand births; while Thudichum gives it as one in two thousand. In three thousand births at the Charité Hospital (2) in Paris no cases were observed. Males appear to be affected more frequently than females. In 106 cases collected by Lindfors and Buschan 75 were males.

These hernia vary greatly in degree; the simpler forms containing only a loop or two of intestine, while in the extreme types the entire gastrointestinal tract together with the liver and the spleen may obtrude through the abdominal parietes. The liver, on account of the round ligament, is frequently found among the contents, as is shown by Kraemer's collection of 23 cases where the liver was found to be present in 22 instances. Other malformations are not unusual; Hertzfeld (4) has collected 16 cases, 12 of which presented the following defects: In four there was a fissure of the palate, in five a fissure of the bladder, in three a pubic fissure, in four a spina bifida, and in one a cerebral hernia.

The diagnosis is comparatively easy except in the case of very small hernia, and can usually be made by inspection alone, since the sac remains translucent for some hours after birth. Small hernia may be overlooked and are occasionally included in the ligature of the cord.

Since the work of Lindfors, published in 1882, an operation for the radical cure of congenital umbilical hernia is conceded to be the only chance the child has for life, or at least of a permanent cure, and is indicated in every instance where prematurity or extensive malformations do not interfere with the child's viability.

CASE I.—The patient, a male child (Italian), aged eight hours, was born August 16, 1903. The delivery was conducted by a midwife, who, on account of the peculiar condition of the cord, called a physician. The child was brought to the Surgical Dispensary of the Mercy Hospital, where I saw it for the first time and learned from the grandmother that the child had not passed anything by the bowel since its birth.

Examination. A male child, weighing nine pounds, well developed and apparently not suffering any pain. On exposing the abdomen, I discovered at the umbilicus a large pear shaped tumor 7 x 8 x 8 cm. The tissue on the surface of this tumor was myxomatous in appearance, being quite translucent, and was joined to a cuff of epidermis, which surrounded the con-

stricted base of the hernial mass, and extended for a distance of 1 cm. above the abdominal wall. Surmounting it was the stump of the umbilical cord which was similar in appearance and directly continuous with the cuff, and the surface of the tumor was formed at the expanded cord. Beneath this myxomatous covering one could plainly see several coils of intestine, which gave the sac of the hernia a somewhat reddish tinge. No peristalsis was detected. The tumor was extremely tense and palpation did not elicit any impulse when the child cried. Examination failed to discover any other malformations.

A diagnosis of strangulated congenital hernia of the cord was accordingly made and operation advised. No attempt was made to reduce the hernia by taxis.

Operation. Under chloroform anæsthesia, an incision was made in the median line of the abdomen beginning 4 cm. above umbilicus and continuing down through the hernial ring, which was about 1.5 cm. in diameter, and lower third of sac. On opening sac about 30 cc. of slightly stained serum escaped. The contents of the hernial sac consisted of a large portion of the small intestine, and the cæcum with its appendix. The visceral peritonæum was considerably injected. The hernial contents were reduced and the incision closed with through and through silk worm gut sutures. No attempt was made to suture the recti muscles on account of extreme youth. Nearly the entire sac was resected, the remainder and the cuff of skin which was present forming a protuberance of about 2 cm. at the point in the incision corresponding to usual insertion of the umbilical cord. Before the patient left the table an enema of 90 cc. of normal salt solution was given, and was retained.

Postoperative Treatment and Progress. During the night the child rested well; there was no vomiting, the bowels moved, and the kidneys acted freely. Small quantities of water with an occasional drop or two of brandy were given at intervals of every half hour. On the following morning the patient was taken to its mother and allowed to nurse at the breast. Despite the unfavorable surroundings of an Italian tenement house and extremely warm weather, the recovery was uninterrupted. The stitches were removed on the twelfth day, and at this time there was no indication of recurrence of the hernia even when the child was crying violently.

Subsequent History. I have had occasion to see the child at varying intervals during the past two years, and he has never exhibited any evidence of a recurrence of the trouble.

CASE II.—The patient was a female child of Slavish parentage. It was born September 18, 1905, the delivery being conducted by a midwife. Later Dr. B. B. Wood saw the child and ordered that it be brought to St. Joseph's Hospital, where I examined it through the courtesy of Dr. J. B. Saling. The history obtained was that of a premature child, eight months term. The bowels had moved freely.

Examination. A poorly developed female child, four pounds of weight. On exposing the abdomen a large oval tumor 10 x 12 x 12 cm. was seen lying on the abdominal wall near the site of the umbilicus. The tissue on the surface of the tumor was similar to that described in the first case, having a thin translucent and somewhat myxomatous appearance. The color of the tumor varied, being dark red in the upper right quadrant, due as was ascertained on further examination, to the liver which occupied this portion of the sac. The remaining portion of the tumor was of a light red color. The coils of intestine and peristalsis were plainly visible. The ligated cord was continuous with inferior surface of the tumor, and the hernial sac was flaccid and fell by gravity to the one or the other side of abdomen. There was an impulse on cry-

* Read before the Allegheny County Medical Society, October 17, 1905.

ing. The opening in the abdominal wall was 6 cm. in diameter, and the line of union between the skin and the hernial sac was very irregular. No other malformations were discernible. The contents of the sac, which consisted of the liver and apparently the entire gastrointestinal tract, although not strangulated, could not be reduced, due to insufficient space in the abdominal cavity.

The prematurity and the extreme type of the malformation were considered as sufficient to contraindicate operative interference. The child died the following day. An autopsy was not permitted.

Of the various operative procedures recommended (5 and 6), simple laparotomy with excision of the sac and uniting of the freshened edges with through and through sutures has proven the most satisfactory. MacDonald collected 31 cases, 19 of which were operated upon with two deaths, while in 12 cases treated by bandage compression there were nine deaths.

References.

1. Lindfors, *Volkmann's Sammlung klinischer Vorträge*, neue Folge, No. 63.
2. Charité Hospital, *Thèse de Paris*, 1894.
3. Buschanan, *Ueber Hernia Funiculi umbilicalis*, 1887.
4. Hertzfeld, *Ein Fall von Nabelschnurbruch*, 1892.
5. *Medical Record*, September 23, 1905.
6. Warren and Gould, *International Surgery*.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at frequent intervals. So far as they have been decided upon, the further questions are as follows:

XLVI.—How do you treat a sprained ankle? (Answers due not later than January 15, 1906.)

XLVII.—How do you treat whooping cough? (Answers due not later than February 15, 1906.)

XLVIII.—How do you treat pruritus ani? (Answers due not later than March 15, 1906.)

Whoever answers one of these questions in the manner most satisfactory to the editors and their advisors will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but not required) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLV has been awarded to Dr. William Warren Potter, of Buffalo, whose article appears below.

PRIZE QUESTION NO. XLV.

INTERSTATE RECIPROCITY IN LICENSING.

By WILLIAM WARREN POTTER, M. D.,
BUFFALO.

Hardly a dozen commonwealths established requirements for State license to practise medicine when the propriety of interstate endorsement without further examination began to be agitated. One of the early suggestions was a national examining

board, but this was abandoned very soon by the most careful observers, because it was apparent that the general government would not usurp the police power of the States for the purpose named.

The difficulties which lie across the path of reciprocity arise, from the very nature of our political division, into States and Territories, united by constitutional provision into a compact whole for certain specified purposes, each division, however, retaining its autonomy for the essential conduct of its internal affairs and its daily needs.

The general government retains the sole right to declare war, make peace, establish tariff, coin money, maintain post offices and post routes, and to deal with other national necessities. The States retain the right to control their internal affairs, establish police regulations, maintain highways, and to do all things necessary to keep our citizens in a condition of peace and prosperity.

The Washington government will not undertake to administer upon questions that are so purely within the rights and powers of the States as are all matters relating to medical practice; nor will the States yield to the national authorities the control of such purely local subjects as granting license to practise medicine.

The medical practice laws in a greater number of the States contain provisions for the recognition or endorsement of licenses issued by other commonwealths which have standards not lower than the State granting the license. This parity is not always easily established, for the reason that some States maintain a high standard regarding one or two requirements, while exacting a comparatively low test in others, the average being less than a properly graded minimum criterion.

Again, all the State medical laws contain provisions prohibiting discrimination against their own citizens in this respect; hence it is impossible for a licensee from one of the lower standard States to obtain indorsement from a State maintaining a higher grade of requirements. Such an one, under existing conditions, must needs take a new examination if he desires to practise in a State of the latter class. How can a reexamination be avoided by a physician with a licensee of one State who wishes to change his residence and practise to another State? Or, in the language of the question at the head of this brief discourse propounded by the editor of this journal, how may interstate reciprocity be best accomplished.

Having used about half the space allotted for this disquisition in stating the chief obstacles to reciprocity, I will endeavor in the remaining half to answer the question which seems to be uppermost in the minds of many State licentiates. One way to establish universal reciprocity would be to persuade the State legislatures to amend their statutes to a substantial uniformity of diction and requirement. But as conditions vary in nearly all the political divisions, this may be difficult of accomplishment. Moreover, the process of unifying the statutes, even admitting its possibility, would prove slow and wearisome. It would entail an enormous outlay of time and money, not to mention that patience and endurance would be taxed even to exhaustion.

Fortunately, however, there remains a sure road to reciprocity through the dignified action of a re-

sourceful and selfsacrificing profession. I refer to the unification of standards for admission to study, for teaching the neophyte, and for applying the final State test. In other phrase, when the preliminary or entrance requirements, the length of terms and methods of collegiate training, and the licensing examinations are placed upon a uniform basis throughout the country, the problem of reciprocity in medical licensure will become solved. This, moreover, would appear to be the only equitable solution of the perplexing question.

Of what avail is reciprocity unless founded on justice? Surely a forced interchange of licensing courtesies would be worse than none; it would be irritating, unfair and ephemeral; whereas, if founded upon uniformity of standards, it would be pleasing, just and enduring.

It seems strange, almost absurd, that entrance requirements have not been placed already upon a basis of uniformity. It is well nigh scandalous that it has not been established. Ignorance should not be tolerated anywhere among those who contemplate entering upon the study of medicine, and the colleges throughout the length and breadth of the land should agree without unnecessary delay upon the minimum of preliminary or entrance qualifications. This once done, it would be comparatively a short step to a standardizing of the methods of teaching, as well as the length of the undergraduate terms. Finally, with these two essentials agreed upon, the licensing boards would be compelled to establish an uniformity of methods of examinations, and, likewise, the States could no longer withhold indorsement of licenses.

The Association of American Medical Colleges can be depended upon to establish the first two propositions, namely, the uniformity of entrance requirements and the length of collegiate terms and methods of teaching. It will then be "up to" the examining boards and the State authorities, to use a trite expression of the day, to see that their methods become of uniform standard and that reciprocity is established with promptitude. These latter questions can and, without doubt, will be dealt with satisfactorily and conclusively by the National Confederation of State Medical Examining and Licensing Boards, just as soon as the college association settles the two propositions that are before it for consideration. The conference in Chicago last April made substantial progress in this direction, and at its next meeting will most likely reach conclusive action on the subject.

I am persuaded, from considerable observation and experience, that interstate reciprocity in licensing is best accomplished through the avenues named, and, indeed, that only in this way can it be accomplished with fairness to all the variant interests, with lasting credit to the profession, and with substantial benefit to the licensees who expect to derive advantages from this privilege.

284 FRANKLIN STREET.

Dr. T. Stuart Hart, of New York City, writes:

This is an important question the solution of which should attract the immediate interest and support of those who desire the unification and elevation of the medical profession of our country.

The best solution would be a national board, un-

der the direction of representative national medical organizations, acting under laws passed by Congress. At present constitutional difficulties stand in the way of such a solution.

Another solution would be for all State legislatures to agree upon uniform laws for licensing medical practitioners, designating State medical bodies to execute them. These medical bodies could then form a national organization, making the regulations uniform, and agreeing, with the consent of the several legislatures, to allow a physician meeting these requirements to practise anywhere in the United States. This plan possesses the almost insuperable obstacle of obtaining an agreement of many legislative bodies. We cannot at present hope for such uniform legislation, but every plan must have such a principle as the ideal to be attained in the course of time.

At present no plan can be adopted which does not contemplate concessions from both sides—on the one hand from those who consider a minimum qualification sufficient and fair for certain sections of the country, and on the other from those who see in the present highest standards something still to be desired.

Even for the sake of obtaining the much desired uniformity of licensing laws, however, I would not advocate adopting requirements essentially lower than the present most exacting ones, as these are none too stringent for the protection of the community and have been won mainly through the persistent and unselfish efforts of the best of the medical profession. A uniform low standard would be exceedingly difficult to change to a higher one. Such a costly retreat would require many a long and bitter contest to regain the lost ground.

However, some parts of our country, at present not as fully developed as the remainder, do not feel that they can afford such severe strictures as are applied elsewhere; this necessitates the adoption of a working plan which in time may attract to its ranks an ever increasing number of those who have in their hearts the highest welfare of the community.

The highest standards as represented by the laws of several States, for example, New York, Pennsylvania, New Jersey, Illinois, etc., are not so far apart that an agreement for uniform regulations could not be reached.

The initiative in this matter must come, as always hitherto, from the medical profession. Let some legal representative medical body, for example, the New York State Board of Medical Examiners, invite to a conference representatives from the legal medical organizations of these several States; let them confer and, selecting the highest requirements of all of these States, agree upon a set of regulations which may include the most stringent requirements of each of these States. The fulfillment of these requirements should be the proposed qualification for a candidate to practise in all of these States. The examination should be under the supervision of an interstate board, but conducted by the several State examining boards. The license should be issued by the State examiners, countersigned by the interstate board.

An act of the several legislatures would be necessary to arrange for the appointment of representatives on the interstate board, and to render a license

so issued valid in each particular State. This, without doubt, could be obtained if the medical profession is sufficiently unanimous in its demands. Such requirements need not preclude the present requirements for practice in the individual State. For example, at the present time Texas, while not demanding a very high requirement to obtain a license, has a reciprocity clause in her medical regulations which would at once admit to her license any physician qualifying under the plan proposed.

At each State examination the candidate should be given the choice of fulfilling the State or the interstate requirements. I do not believe it would be long before all candidates would elect to qualify themselves by means of the interstate standards, and year by year additional States would admit to their license those holding an interstate license and thus seek admission to the interstate board.

The expenses of the interstate board could be met by a small additional fee, to be paid by the candidate electing the fulfillment of the requirements of the interstate license.

A violation of the law of a State, the penalty for which involves the forfeiture of a license in that State, should also involve the forfeiture of his interstate license.

The main difficulties which I foresee in the plan proposed are: 1. The difference of opinion as to what constitute the highest requirements, and (2) the obstacles which may be met in obtaining the necessary legislation. Both of these may be overcome if a sufficiently large and influential part of the medical profession is desirous of the goal to be attained.

To recapitulate the essential features:

1. Initiation by the medical profession.
2. Adoption of a standard high enough to include the most stringent requirements of all of the States.
3. Uniform legislation in at least a few States conferring upon certain legally recognized medical organizations the power to appoint representatives on an interstate board, and making legally valid licenses issued in conformity to the above standard when countersigned by the interstate board.
4. Examinations by the State boards, supervised and unified by the interstate board.
5. Licenses issued by the State boards and countersigned by the interstate board on fulfilling the above mentioned requirements, allowing the holder to practise in any of the consenting States.

The advantages of the above plan are as follows:

1. It offers a working basis, which can be made acceptable to at least a few States at once.
2. It raises rather than lowers the present highest requirements.
3. It leaves the individual State free, within its own limits, to adopt such less stringent requirements as it may see fit.
4. It provides for examinations conducted by the present State organizations near the candidate's home.
5. It affords a stimulus to States having less stringent requirements to adopt higher ones and to seek admission to the interstate board.

Dr. S. A. Knopf, of New York (who wishes it understood that he is not competing for the prize), remarks:

There is only one way to really solve this problem, and that is to abolish it. Let us cut the Gordian knot. Every physician licensed to practise in any one State should have the right to practise medicine throughout the United States. If there is any doubt that the standard of sufficiency or the requirements in any one State are not high enough to guarantee competency, the matter should be submitted for final decision and action to a national board.

This national board should develop into or constitute a part of a Department of Medical Affairs, with its seat in Washington and with a secretary equal in rank to the Secretary of War, at the head of it. Such a department should be analogous to the "Ministerium für Medizinal-Angelegenheiten" in Germany, or to the "Ministère de l'Instruction publique" in France. This department of medical affairs should appoint a permanent examining commission composed of men from existing State boards or recommended for their particular fitness for the position as examiner by their State medical society. Owing to the vastness of our country and the great number of medical schools, it would probably be necessary to appoint a number of commissions, perhaps one for the East, one for the South, one for the Middle West, and one for the Pacific Coast. Such commissioners should meet annually or biannually, according to the need. The examinations in anatomy, physiology, chemistry, pathology, bacteriology, obstetrics, surgery, medicine and sanitary science should be the same for the students of all schools. *Materia medica* alone should be especially represented. Medical students should be allowed to take part of their examination such as anatomy, physiology and chemistry, during their third year.

The publication of the reports of the examination, with mention of the schools wherefrom the men graduated, would result in a gradual diminishing of the inferior schools. The examination conducted by the United States Department of Medical Affairs, while fair to every one, would nevertheless be of a sufficiently difficult character to discourage inferior men from entering the study of medicine, and so would decrease the number of students and inferior practitioners as well as schools, all of which would neither be a detriment nor a loss, but, on the contrary, a benefit to the profession and the public at large.

Of the other important functions which the department of medical affairs, with a cabinet minister at its head, could undertake, either separately or in conjunction with the Public Health and Marine Hospital Service, I cannot speak in this essay, as they do not appertain to the subject. I merely wish to say that for a great republic such as ours a Department of Medical Affairs, protecting 80,000,000 people as far as it is possible from disease and quackery in all its forms, should be as important a matter as protecting our farming industry by preventing plant and animal diseases, or our country against foreign invasion. The government should give a guarantee to the people throughout the States that a physician who has the indorsement of the United States government is fit to take upon himself the responsibility of treating human ills, and the priv-

weak. The part was sprayed with chloride of ethyl and a cross cut was made through the carbuncle. Daily exposure of two to three minutes to the Röntgen rays at a distance of 20 centimetres produced marked beneficial results, as the affected tissue melted away and the patient rapidly recovered. The local dressing was with a three per cent. solution of hydrogen peroxide. Previously a solution of corrosive chloride of mercury (1 to 1,000) had been applied, and also an alcohol dressing, but without noteworthy results.

Mulberry Leaves as a Diuretic.—In a case of œdema of the ankles in a patient, 80 years of age, who had suffered with it for ten years (Froestzky, *Le petit Journal de médecine*), an infusion of mulberry leaves (*Rubus chamæmorus*) was successfully used. It was prepared extemporaneously as follows: Seven grammes and a half of the dried leaves were infused with two cupfuls of boiling water and allowed to stand in a warm place for eight to ten hours. Of this, half was swallowed in the morning and the remainder in the evening. The taste of this infusion is not pleasant, but after using it for three days the quantity of urine gradually increases to a marked degree and the œdema disappeared.

Giant Urticaria of Choraic Type Treated Successfully with Hypodermic Injections of Quinine and Antipyrine.—A Russian military surgeon, Dr. M. N. V. Chebayer, in a rebellious case of giant urticaria in a soldier, probably resulting from exposure to extreme cold, and which had persisted for four years, had tried all the usual methods of treatment, but without success. Finally, he decided to use the following:

R Quinine hydrochlorat.,.....0.12 gramme;
Antipyrinæ,.....0.8 gramme;
Aquæ destillat.,.....24 grammes.

As the result of a single injection of 1 c.c. (m. xv) of this solution, the urticaria abruptly and definitely disappeared.—*Bulletin médical*.

Sodium Fluoride as a Vesical Antiseptic.—Tuffier directs attention in the treatment of chronic cystitis to sodium fluoride, which acts as a powerful antiseptic. It is a white powder, extremely soluble in water. It possesses the special property of liquefying the secretions of certain cases of chronic cystitis, which ordinarily are so thick that they cannot pass through the catheter. In these cases of slimy or glairy cystitis, Tuffier practised with success irrigation of the bladder with solutions of sodium fluoride (0.25 to 0.50 per cent.). Stronger solutions than these he found to be irritating. These lavages were repeated every two days, but only until the vesical secretion became sufficiently fluid to readily pass through the catheter. When this much was accomplished, the sodium fluoride was discontinued, and in place boric acid solution or other antiseptic was substituted.—(Supplement to the *Journal de médecine de Paris*, December 24, 1905.)

Treatment for Acute Rheumatic Fever.—J. V. Shoemaker condemns the use of synthetic salicylic acid on account of its causing sore mouth, digestive disorder, and depression; and approves

of salicin (grains xx every three hours) and oil of gaultheria (salicylate of methyl). He also applies the later to the affected joints and envelops them in cotton. He advocates strychnine for the heart and iron to counteract the anæmia. He rejects the coal tar antipyretics and relies upon the alkalies in combination with organic salts, as the acetates and citrates. In anæmic cases he prescribes Basham's mixture, or the following:

R Strychninæ acetatis,.....gr. $\frac{1}{2}$;
Ferri citratis,......i;
Ligammonæ acet.,.....3iv;
Syr. aurantii rubri q. s. ad.....3vi.

M. Sig.: Dose, a tablespoonful every three hours, in water.

Formula for Hypodermic Administration of Caffeine and Camphor.—In cases of septicæmia and in heart failure, it is sometimes desirable to administer a heart tonic and diaphoretic such as the following:

R Caffeinæ,......ãã 0.25 gramme;
Sodii salicylate,......ãã 0.25 gramme;
Aquæ destillatæ,......I c.c.;
Misce et adde
Spiritus camphoræ (10 per cent.),.....I gramme;
(or 1.25 c. c.)

Ft. sol.

This solution contains about 0.25 caffeine and 0.10 camphor, the usual dose of these remedies. It remains clear for several months and does not cause abscesses, if combined for hypodermic injection, as follows: One c.c. of above solution is added to 3 c.c. of pure sterilized glycerin. The combination when used hypodermically causes some burning pain at the point of injection, but this is only temporary. The quantity for injection (4 to 5 c.c.) is rather large, and requires a syringe such as is used for serotherapy.—Dr. A. Claret in *Les Nouveaux remèdes*, November 24, 1905.

Treatment of Röntgen Ray Burns.—Engman, in an article in the *Ther. Gazette*, recommends, in the treatment of burns from the Röntgen ray, that the exposures be discontinued and lanolin applied for twenty-four hours, after which the following combination is recommended:

R Acidi boricæ,.....3iiss;
Zinci oxidi,......ãã 3i;
Bismuthi subnit., {
Pulv. amyli, {
Olei olive, {
Aquæ calcis, {ãã 3iij;
Lanolini, {
Aquæ rosæ,......3iiss.

M. Ft. unguentum. Sig.: Apply locally to the affected areas.

Satterlee, in the same periodical, recommends the following combination in the treatment of this condition:

R Acidi carbolicæ,......3iv;
Aquæ rosæ,......3iv.

M. Ft. solutio. Sig.: Apply locally.

Through the *Medico-Chirurgical Journal*.

Caustic Applications for Soft Chancres.—In order to convert a virulent venereal ulcer into a simple granulating surface, M. Jeansline applies a ten per cent. solution of phenol in alcohol, or uses Balzer's formula:

R Zinci chloride,.....I part;
Zinc oxide,.....9 parts;
Water, q. s. in order to form a paste.

This is allowed to remain in place for twenty-four hours. Several applications may be necessary (*Gazette des hôpitaux*, December 19, 1905). The phagedenic chancre is treated with iodoform ointment (1 to 10) and prolonged warm baths. If this fails the charcoal sulphuric acid paste is spread over the ulcer with a spatula. When the slough separates it leaves a healthy granulating surface. The syphilitic chancre requires constitutional rather than local treatment. Recent researches seem to favor the view that its extirpation, if not made too late, is not always without beneficial results, although failure has been the rule hitherto.

Treatment of Syphilis by Hypodermic Injections of Phenylate of Mercury.—E. Louise and Felloutier (*Les Nouveaux remèdes*, November 24, 1905), after a series of experiments upon animals, confirmed by clinical tests, highly approve of phenylate of mercury for hypodermic use in syphilis. The solution used consists of 0.075 gramme of the salt to the cubic centimetre, the menstruum being acetic ether. In this strength each five divisions of the ordinary hypodermic syringe (containing 1 c.c. graduated in twentieths) corresponds to 0.01875 gramme of phenylate of mercury, or approximately 0.01 gramme of metallic mercury. The injections were made with a syringe unaffected by acetic ether, armed with a platinum needle, the latter long enough to penetrate the panniculus adiposus. The injections were usually made into the muscles of the buttock. No local tenderness or nodosity was caused even by repeated injections. The daily dose began with 0.02 to 0.03 gramme, and in some cases this was gradually increased to 0.15 gramme in 2 c.c., corresponding to 0.087 gramme of metallic mercury in a day. The paper was based upon the treatment of seventy cases of syphilis, in primary, secondary, or tertiary stages of the disease. The mercury was constantly encountered in the urine and in the fæces, not only during the continuance of the treatment, but for a month afterward. The authors conclude that phenylate of mercury dissolved in acetate of ethyl and administered by intramuscular injection does not cause any accident, even in doses much higher than those in which mercury is usually administered in therapeutics. The mercury is eliminated normally, especially by the kidneys and gastrointestinal mucosa.

Treatment of Banti's Disease, or Splenic Anæmia.—To a case of splenomegaly accompanied by marked anæmia and debility, Byron Bramwell, of London, gave pills of iron carbonate (Blauds pills, five grains each) three times a day. He also had the area over the enlarged spleen exposed once daily to the x rays. Improvement of a decided character was observed after a few days' treatment, and at the end of a month the patient looked and felt well and was discharged by his own request, in order that he might return to work. At this time his spleen was found to be somewhat smaller than when he had been admitted, the red blood corpuscles had increased from 2,440,000 to 4,260,000 for a c.mm., and the

hæmoglobin from 20 to 62 per cent. The discoloration of the skin was far less noticeable than when he was admitted. The result was deemed sufficiently favorable to warrant a resort to the same treatment in future cases. In a second case, a woman, there was daily fever with anæmia, until twenty grains of boric acid were given three times a day, in conjunction with quinine hydrobromate (5 grains, three times a day) and tincture of the chloride of iron (10 drops, three times a day). Improvement was very marked in this case after the addition of the boric to the treatment. Not only did the temperature fall to normal, but the urine was increased in quantity, the shivering, sweating, and joint pains ceased. The discoloration of the skin also became much less. A month later she was discharged by her own request, feeling very well, but the enlargement of the spleen still continued.—*Clinical Studies*, iv, p. 1, November, 1905.

Treatment of Muscular Trembling in Infants.—G. Raffaelli (*La Pediatria*, through *La Presse médicale*) has observed in three infants, aged, respectively, 14, 8, and 11 months, continuous trembling of slight degree, but general throughout the body. There was no other symptom indicating nervous disease. The movements occurred independently of voluntary movement and ceased during sleep. They all had digestive disorders, and one had decided rachitis. Attention to the digestive organs caused the symptom to disappear. In one case at the onset of a fresh attack of enterocolitis, the trembling again was noticed. The author believes that this form of neurosis is caused by toxines absorbed from the digestive tract. He points out its relations to tetany in infants, which so often is dependent upon digestive disorders; but none of his cases, however, showed any sign of tetany.

The Medical Treatment of Epilepsy.—The treatment of epilepsy, according to Hugues (*Journal de médecine de Paris*) does not consist merely in preventing the return of the fits, but mainly in remedying the causes and conditions which bring on these crises. It is probable that autointoxication plays an important part in the reproduction of the paroxysm, and the reputation gained by silver nitrate in the treatment of this disease, probably depends upon the power which it possesses of destroying intestinal toxines. The rational treatment of epilepsy would consist then in treating the patient with all agents, or conditions, mental or physical, which will build up his nervous tone and increase his nervous stability, especially in the cortical motor centres of the cerebrum; and will also improve his general condition. The ætiology is sometimes complicated by gout, rheumatism, neurasthenia, syphilis, malarial poisoning, etc., which must be considered when confronted by cases of epilepsy or of epileptoid affections. The bromides are to be used in combination of several, alternating with single bromides. The digestive canal must be disinfected and perfect digestion established. The return of the organism to the normal through physiological routes, in short, is the medical treatment of epilepsy.

NEW YORK MEDICAL JOURNAL.

INCORPORATING THE

Philadelphia Medical Journal
and The Medical News.*A Weekly Review of Medicine.*

Edited by

FRANK P. FOSTER, M. D.,
and SMITH ELY JELLIFFE, M. D.

Address all business communications to

A. R. ELLIOTT PUBLISHING COMPANY,

Publishers.

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, JANUARY 20, 1906.

A NOTED JAPANESE NAVAL SURGEON.

In our news columns of this week we call attention to a notable event in the coming of Baron K. Takaki, of Tokyo, to deliver the Cartwright Lectures of the Alumni Association of the College of Physicians and Surgeons of New York. Baron Takaki has occupied for a number of years a most important position in the medical corps of the Japanese navy, and, as he is an accomplished English scholar, the medical profession of New York are to be congratulated on the opportunity offered to hear him.

During his youth he was sent by his government to study medicine in England, where he graduated with honor from St. Thomas's Hospital School, studied the sanitary system of the British navy, and passed examinations for the degrees of F. R. C. P. and F. R. C. S. On his return to his native country he directed his chief attention to the reformation of the sanitary and medical system of the newly created navy of Japan. It was not only reorganization that he accomplished, but the creation of an entire medical equipment and medical sanitary service. He was rapidly promoted to the rank of surgeon general of the navy, a position which he held until the time of the Japan-China war. As a recognition of his great services rendered to the Emperor and his country he was created a baron at the conclusion of this war. At present he is in the Naval Reserve.

During his active service in the navy Baron Takaki initiated and carried out certain fundamental changes in the dietary and sanitary regu-

lations of the navy which resulted in the almost total suppression of beriberi, which up to that time had seriously impaired the efficiency of the service, affecting annually almost one quarter of the navy's personnel. Baron Takaki has also been president of the Naval Academy of Japan, president of the Tokyo Charity Hospital, and councillor of the Association of Sanitary Improvement of Japan, and has held other important positions. He has been active in spreading the principles of the Red Cross Society in Japan, and it is to his efforts that the large number of Red Cross members in that country is chiefly due. Baron Takaki has received the honorary degree of Doctor of Medicine of the Japanese government, a degree issued only by the Department of Education, and not the same as the degree of M. D. conferred on the graduates of the university. He is a member of the House of Peers of the Parliament of Japan, having been directly nominated by the Emperor.

CALCAREOUS DEGENERATION.

It was formerly taught that calcareous degeneration was a purely passive process, the cells taking no part in it. The tissues were thought to be gradually petrified by the deposit of earthy salts from the blood. So recently as in 1904 calcification was said to be a process of infiltration. The deposition of calcium salts could not be satisfactorily explained by the theory that those salts were carried to the tissues by the blood and the lymph, because the tissues which are especially prone to calcification are poorly supplied with both these fluids. And the theory of the relative amounts of carbonic acid held in solution by the arterial and the venous blood did not satisfactorily explain the process.

Oskar Klotz (*Journal of Experimental Medicine*, vii,) has recently studied calcareous degeneration as it occurs spontaneously in man and is produced experimentally in the lower animals. From both the experimental work and the analysis of human degenerating tissues the conclusion was drawn that calcareous degeneration was preceded or accompanied by deposits of a soapy material. This soap exists in chronically inflamed tissues in advance of the deposit of lime, or if lime is already to be found in the tissues, the soap appears in the peripheral zone of the calcareous infiltration. Moreover, it would seem that with the first deposit of soap calcium salts are immediately attracted to it from the fluids of the body. Such progressive calcareous deposits are marked by the appearance in the periphery of groups of granules, some of which are

found to react for both calcium and soap, others for soap only; that is, some of the soap deposits have been converted into a calcium soap. In old calcified fibroids and other tumors the calcareous deposits, except in the advancing border of the calcified area, are composed chiefly of calcium carbonate and calcium phosphate, with no soap. This is explained by the replacing of the fatty acid moiety of the calcium soap by phosphoric or carbonic acid. A study of normally and pathologically developing bone by the same staining methods (Sudan III and a five per cent. aqueous solution of silver nitrate) employed for the staining of calcareous degeneration shows that in the former the process of calcification is a distinct process in which the specific cells of the part play the chief rôle in laying down the calcium salts. No appearance was observed which would lead to the belief that fatty substances are concerned in the formation of bone at the epiphysial line.

CALCAREOUS DEGENERATION IN PATHOLOGICAL TISSUES.

On examining the arteries of adults the frequency of the presence of recognizable amounts of calcium salts in the media of the aorta of adults was noticed by Klotz. The same impregnation with calcium salts was seen in the media and the intima of all vessels with arteriosclerosis. From a study of cases of calcareous infiltration of thickened pleuræ, of calcified fibromata, of calcareous infiltration of ovarian cysts and of cysts of the broad ligament, of calcareous tuberculous nodules, and of pancreatic fat necrosis, that author has demonstrated that the changes which precede calcareous infiltration produce neutral fats, fatty acids, and soaps which stain with Sudan III. In such areas three zones may be made out: 1. The outermost, oldest zone of complete calcification, which exhibits a dense calcareous deposit lying in a hyaline matrix, with little or no soap or fatty substance. 2. The intermediate zone in which granules of calcium salts and soap granules are in close apposition. 3. The innermost and most recent zone, which contains fat, fatty acids, and soaps, but no demonstrable calcium salts.

THE EXISTENCE OF SOAPS IN THE NORMAL ORGANISM.

Normally, in the animal body, fats circulate in the blood as diffusible soaps. The various cells take up these soaps, which may be stored in the cytoplasm of the cell, after having been reconverted into neutral fats, or become assim-

lated into the cytoplasm, when they are unrecognizable by the ordinary microchemical tests. If this proposition of the normal physiological chemistry of fat is accepted, the appearance of fat and soaps in degenerating cells may be accounted for either by absorption or infiltration of soaps from the surrounding media, the degenerating cell retaining the power of splitting off fat, but being unable to make use of it in metabolism; or by the liberation of the fat from its combination with the cytoplasm. The appearances seen in the cells of the atheromatous areas in arteries indicate that the former process does occur.

THE EXPERIMENTAL PRODUCTION OF CALCAREOUS DEGENERATION.

Studies upon experimental calcification in the kidney confirm and extend the observations made upon calcareous changes in human tissues. If the uriniferous tubules become the seat of the calcareous degeneration, it is possible to recognize the following stages: 1. A stage of cell degeneration characterized by swelling of the cell substance and diminution of the nuclear chromatin. 2. A stage in which fat appears in the cells, apparently from absorption. 3. A stage in which calcareous salts appear in the cells, accompanied by soaps. Therefore an intimate relation between cytoplasmic degeneration and the formation of insoluble soaps would appear to exist. Judging from observations made in test tubes, the relatively insoluble soaps are compounds between soap and certain albuminous matters liberated from the cytoplasm. Experimentally, soaps have been produced within the organism by placing capsules containing fats and fatty acids within the tissues. After several days it is found that the capsules contain calcium soaps and possess an amount of calcium far in excess of that of the normal fluids. The blood and the lymph, however, are undoubtedly the source of the calcium in these deposits. The process of formation of calcium soaps has been explained by Klotz by the following hypothesis: First, that sodium and potassium soaps and soap albuminate are formed and that interaction occurs between them and the diffused calcium salts from the lymph, the less soluble calcium replacing the sodium and the potassium. This process has been demonstrated in the boundary zone of areas of calcification. Second, that under certain conditions the calcium salts act directly on the neutral fats present in the degenerating cells. Third, that the neutral fats are first broken down into fatty acids and that these react with the calcium salts to form the soaps. This process is clearly

evident in fat necrosis. It is quite possible that the second process also occurs in the animal organism.

HOSPITAL BIDS FOR PATIENTS.

A fire department might enhance public appreciation of the importance of its work by promoting arson. That would be criminal. A hospital or dispensary may magnify its appearance of usefulness by attracting patients, thus enabling itself to print big figures in its annual reports. That is not criminal, but it is in a high degree discreditable. A hospital may justly pride itself on the amount of needed relief that it furnishes to the sick and injured, but it cannot reasonably claim credit for ministering to necessities that are at least partly imaginary or for relieving those of the sick who would naturally have turned elsewhere for treatment but for inducements that it had itself held out. We frown on the touting system sometimes resorted to by the proprietors of private sanatoria and by individual physicians; we ought to look with equal disfavor on the employment of similar methods by public institutions, unless, indeed, we are willing to go back to the position that the king can do no wrong. It is not often, to be sure, that an unmistakable bid for patients is made publicly by a municipal or incorporated hospital, and the occasional ludicrous rivalry of ambulance surgeons must not be interpreted as materially weakening this statement, for perhaps it springs rather from the ardor of youth than from fidelity to a settled policy. Nevertheless, we are not all strangers to the ways and means too frequently taken by hospitals and dispensaries to give apparent justification to an impressive annual report, whereby fat contributions to the funds may be secured.

Fortunately for our self-respect as a profession, it is rare for members of the medical staff of a hospital to allow their names to be published in connection with the institution's appeal for patronage. We prefer to think that when their names do so appear it is without their knowledge or at least without their approval. Certainly such a publication is undignified, and the Philadelphia County Medical Society, as shown by resolutions which we print elsewhere in this issue, has recently pronounced it unethical. One of the resolutions provides that "unless the physician or physicians implicated shall promptly disavow responsibility for such advertisement and proceed to prevent such, the offender or offenders shall be liable to be suspended from the Philadelphia County Medical Society for one year." The terms of this resolution cannot be regarded as harsh, and it is to be hoped that those who have erred, even by inadvertence, will hasten to "disavow" and, if necessary, to

"proceed." We trust that it will not be requisite for any of them to carry their procedures to the point of resigning, but governing boards are apt to be obdurate, and it is hard to tell what may happen in some instances.

AN UNDETERMINED TROPICAL ULCERATION.

In the January number of the *Journal of Cutaneous Diseases* Dr. John A. Fordyce describes a singular case of ulceration of the nose, the pharynx, and the larynx. It occurred in a colored man, forty-four years old, who was born in Panama and had lived there, working on a rubber plantation, until after he was attacked with the disease for which, in the autumn of 1904, he was admitted into the City Hospital. In the same article Dr. W. F. Arnold, a retired naval surgeon, makes some general comments on cases clinically similar observed by him on the island of Guam and on cases reported from various tropical portions of both the eastern and the western hemisphere.

Dr. Fordyce's case was at first thought to be syphilitic, but thorough antisiphilitic treatment failed to affect the lesions. A provisional diagnosis of tuberculous disease was then made, but there was no reaction to the tuberculin test and no tubercle bacilli could be found. It was subsequently thought that the ulceration might be analogous to the nasal ulcerations described by Breda as occurring in Italians who had returned from Brazil, termed by him *framboesia brasiliana*, or *boubas*.

The disease in the case studied by Dr. Fordyce began with an annoying and offensive mucopurulent discharge from the nose, soon accompanied by increasing difficulty in breathing. Several months later small ulcers appeared about the nasal orifices. At the time of the examination the nose was very broad at the tip, with extensive ulceration around the nostrils and involving a part of the upper lip. The septum was entirely gone and the anterior nares showed a sloughing mass with hardly any recognizable landmarks. The uvula was gone, and the soft palate presented a wormeaten appearance. The larynx and the pharynx showed old cicatricial contractions with ulcerating areas in places. The vocal cords were rough and reddened and did not approximate. The arytaenoid bodies were red and enlarged. The tongue was atrophied at its base.

Dr. Arnold is of the opinion that the case is clinically indistinguishable from an affection of the nasopharynx which he found very prevalent

in Guam in 1902, when he was health officer of the island and senior surgeon of the naval station. It affected from one to five per cent. of the entire native population. The eyes were often involved by extension through the lacrymal ducts, but the larynx generally escaped without notable damage. All ages and both sexes were affected, and terrible deformity was often produced, but the disease was not known to have proved fatal.

THE MEAT INDUSTRY OF THE UNITED STATES.

The *Lancet* has been investigating the business of the slaughter of animals for food and the dressing and packing of meat as pursued in Chicago. In its issue for December 30th, in an article entitled The American Beef Trust and Chicago Stock Yards, our contemporary, basing its statements on investigations by a special sanitary commissioner of its own, draws a revolting picture of the industry. Its strictures relate mainly to the uncleanness which is said to accompany the work—uncleanness of a sort to favor the contamination of food products with pathogenic germs. The accusation is a grave one, and, whether or not it is more sweeping than the facts justify, it should lead us to put forth all possible efforts to do away with the objectionable feature.

But among the *Lancet's* statements there are some others that we think must have been made on defective information—for example, that hogs are the only animals examined by the government inspectors, and of them only such as are destined to furnish food products for exportation to countries that would not otherwise accept them, those intended for Great Britain and for domestic consumption not being inspected at all. All this is certainly at variance with the story told by Dr. D. Arthur Hughes, an inspector acting under the Bureau of Animal Industry, in our issue for December 9th, in an article entitled The Value of Meat Inspection to the Public Health. Still, we presume a good deal of meat does escape inspection, and it is to be hoped that the regulations will be made as stringent as may be found necessary to insure the wholesomeness of all the products marketed.

STATISTICAL DATA IN PUBLIC HOSPITAL REPORTS.

State, county, municipal, public, and private hospitals are beginning to issue annual reports for 1905. In looking over these reports one is struck with the vast amount of time, energy, and money expended in arranging and publishing so

much statistical matter that is of comparatively little use when presented in this shape. Much of it is valuable in a way; but why not keep it on file in a form ready for use in the hospital or institution where it is made, so that it may be given out when called for by anyone interested? As a substitute measure, it strikes us that it would be better in these busy days when people—particularly professional men—desire to get at the gist of a thing as easily and as quickly as possible, either to deal with bulky hospital statistics in very condensed form or to use them in substance in the body of the report in a way designed to bring out the salient features they are intended to illustrate. To “lop off” the excrescence of long, complicated, and uninteresting statistical tables from institutional reports strikes us as likely to prove a reform.

OUR OPENING NUMBER FOR THE YEAR.

Our issue for January 6th was to a certain extent a “jubilee” number, celebrating the consolidation of the *Medical News* with our journal. We were able to publish in it a large amount of matter which seems to us to be of a quality rarely found in such profusion in a single issue of a weekly journal. Our subscribers have given gratifying evidence that they agree with us, for we have received many letters commendatory of the number—so many, in fact, that we have found it impracticable to acknowledge them individually. We beg, therefore, to signify now in this collective acknowledgment our deep appreciation of the cheering words that have come to us.

Obituary.

EMMET COOPER DENT, M. D.,
OF NEW YORK.

Dr. Dent was born in Macon, Miss., in 1857. He was a descendant of the Dents and Witherpoons of Maryland and South Carolina, who were prominent soldiers and statesmen during the Revolutionary period. He began the study of medicine at the University of Virginia, and completed his course at the Bellevue Hospital Medical College in New York in 1879. His life work was the study of insanity and the care and treatment of the insane, and for this unfortunate class he sacrificed every personal interest and ambition. In January, 1879, he was appointed assistant physician on the medical staff of the New York City Lunatic Asylum on Blackwell's Island by the Commissioners of Public Charities. He was promoted to the office of assistant medical superintendent in December, 1882, and was appointed medical superintendent in December, 1886. On December 8, 1886, he married Anna Lane Scott, of Mississippi. She and two daughters remain to mourn their loss.

In February, 1896, when the New York city asylums were reorganized and placed under State care, Dr. Dent, with his hospital, was transferred to Ward's Island, where he served as superintendent of the female department of the Manhattan State Hospital. On June 1, 1905, the two departments were consolidated, and he was made superintendent and treasurer of the entire hospital as it now exists, the largest and most modern of its kind in existence.

To Dr. Dent is due the credit of many advances and ideas in the care and treatment of the insane. He was noted at home and abroad as being the first to introduce and develop hydrotherapy as a means of treatment, almost to the entire exclusion of medicines; the introduction of camp life for the acute insane; the use of music and of special diversions and amusements; advanced surgical care and treatment, and of operative procedures, especially on the female insane. He was the author of numerous articles on insanity. His hospital was the first to accept the more modern views in psychiatry, and has made further advance in this feature in the way of systematic investigation in detail and in the clinical study, he, personally, giving clinical lectures on the various types and manifestations of insanity and organizing his staff of thirty physicians into a society for the advanced study of psychiatry. Nothing of promise toward the interest of the hospital escaped his attention, and he was ever keen and alert for the welfare of the five thousand unfortunates under his watchful care.

News Items.

NEW YORK CITY AND STATE

The Kingston City (N. Y.) Board of Health has re-elected Dr. J. J. Wolf health officer for the ensuing year.

A Society of Internes of the Troy Hospital has been organized, with Dr. Francis Scott, resident surgeon, as secretary.

The Queens-Nassau (N. Y.) Counties Medical Society held its semiannual meeting on Wednesday, January 10th, and adopted the revised by-laws, rendered necessary by the consolidation of the two State societies.

The Kingston (N. Y.) Board of Education.—At a recent meeting of the board Dr. Walter D. Hasbrouck was elected to fill the vacancy caused by the resignation of Mayor Wesley Thompson.

The Buffalo Academy of Medicine held a stated meeting on Tuesday, January 16th, the programme being furnished by the Pathological Section, as follows: Bacteriolysis of Hog's Blood, by Dr. B. Neade Bolton, of Washington, D. C.

The Journal of Experimental Medicine.—It is announced that this journal, heretofore issued by the Johns Hopkins Press, will in future be published by the Rockefeller Institute, at Fiftieth Street and Lexington Avenue, New York city.

New Assistants at St. Luke's Hospital.—Dr. K. M. Vogel has been appointed assistant to visiting physician Dr. Theodore C. Janeway; Dr. W. A. Bastedo assistant to Dr. Van Horne Norrie, and Dr. E. W. Gould assistant to Dr. George A. Spalding.

The Harvey Society.—At the meeting of Saturday, January 20th, the subject was A Critical Study of Serum Therapy, by Professor William H. Park. At the meeting to be held on Saturday, January 27th, Professor Lewellys F. Barker will speak on The Neurones.

The Medical Society of the County of Fulton, N. Y., met recently in annual session, at Johnstown, and elected the following officers: President, Dr. C. B. Mosher, of Johnstown; vice-president, Dr. C. M. Lefler, of Glovers-

ville; secretary and treasurer, Dr. J. D. Vedder, of Johnstown.

The Cartwright Lectures.—The Alumni Association of the College of Physicians and Surgeons, New York, announce that Baron Kanahiro Takaki, of Tokyo, will deliver the Cartwright lectures at the New York Academy of Medicine, January 25th, 29th, and February 2d. The subjects will be Military and Naval Sanitation.

The Health Commissioner of Oneida, N. Y.—Dr. George F. Mills was appointed health commissioner on January 5th. Dr. Mills received his medical education at the University of Buffalo, and has held positions in the county hospital and at the State Hospital for the Insane in Buffalo, and at Ward's Island, New York.

The Section in Medicine of the Buffalo Academy of Medicine.—The following was the programme for a meeting held on Tuesday, January 9th: The Relation of Alcoholism to Tuberculosis, by Dr. Joseph W. Grosvenor; discussion opened by Dr. DeLancey Rochester; Two Unusual Cases of Nephritis, by Dr. George A. Himmelsbach; discussion opened by Dr. Thomas B. Carpenter.

The Widal Test in Buffalo.—The Department of Health of the city of Buffalo has notified physicians of the city that the bacteriological laboratory is now prepared to make the Widal test free of charge. Widal outfits will be kept at all the police stations. The outfit includes a sheet of aluminum foil, a wire loop, a card to be filled out by the physician using the outfit, and an envelope for mailing it to the municipal laboratory.

The Chautauqua (N. Y.) County Medical Society.—A special meeting of the society was called for Thursday, January 18th, for the purpose of reorganizing, under the constitution and by-laws of the consolidated State societies, in compliance with a resolution adopted by the Joint Committee of Conference, appointed for the purpose of consolidating the two State medical organizations. The meeting was to be held at Jamestown.

The Medical Society of the County of Erie, N. Y.—At the annual meeting, held at Buffalo, on Thursday, January 9th, officers were elected as follows: President, Dr. A. H. Briggs; vice-president, Dr. Edward Clark; secretary, Dr. F. C. Gram; treasurer, Dr. DeWitt C. Greene; board of censors, Dr. H. R. Hopkins, Dr. DeLancey Rochester, Dr. Irving R. Potter, Dr. J. H. Grant, and Dr. F. E. Fronczak.

The Medical Society of the County of Oneida, N. Y.—A quarterly meeting was held at Utica, on Tuesday, January 9th. The programme included the following papers: Nontuberculous Joint Affections, illustrated by radiographs and lantern slides, by Dr. Louis A. Weigel, of Rochester; Minor Injuries of the Eye, by Dr. R. O. Lees, of Utica; A Report of an Interesting Case of Typhoid Fever, by Dr. J. O. Stranahan, of Rome.

The Medical Society of the County of Rensselaer, N. Y., held a meeting at Troy, on Tuesday, January 9th. A paper entitled The Complications and Antitoxine Treatment of Diphtheria, was read by Dr. Herbert D. Pease, director of the State antitoxine laboratory, at Albany. At the forthcoming centennial anniversary of the society it is expected that addresses will be made by Dr. Harvey Cushing, of Johns Hopkins University, and Dr. Richard M. Pearce, director of the Bender hygienic laboratory at Albany.

The Physicians' and Surgeons' Association of Fulton, N. Y.—A meeting was held on Thursday, January 4th. The subject for discussion was Post Partum Hæmorrhage. In the absence of the appointed leader the discussion was of a general character. The subject for discussion, as announced for the next meeting, will be Dead Beats, and inasmuch as the association is taking a great deal of interest in the matter of those who neglect to pay their doctors' bills, it is expected that the discussion will be a very interesting one.

A Joint Meeting of the Saratoga and Glens Falls Medical Societies, will be held at the Spa, on Thursday, January 25th. The programme for the meeting includes a Symposium on Acute and Chronic Bronchitis and Whooping Cough, divided as follows: Dr. J. F. Humphrey will read a paper on the Symptoms and Treatment of Whooping Cough, and Dr. G. F. Comstock will read a paper on the Treatment of Acute and Chronic Bronchitis. The discussion will be opened by Dr. D. C. Moriata and Dr. G. H. Fish.

The New York State Hospital for the Care of Crippled and Deformed Children, at West Haverstraw.—The Surgeon-in-Chief announces that a friend of the hospital has contributed \$500, to be used for transporting eligible, indigent patients, living in the rural district of the State, to and from the hospital. All applications for admission should be addressed to Dr. Newton M. Shaffer, Surgeon-in-Chief, 28 East Thirty-eighth Street, New York city, and should, if possible, be accompanied by a certificate from a physician as to the nature of the deformity.

The Wyoming (N. Y.) County Medical Association held its annual meeting at Warsaw, on Tuesday, January 9th. The following officers were elected for the ensuing year: President, Dr. George S. Skiff, of Gainsville; vice-president, Dr. Frank E. Bliss, of Warsaw; secretary and treasurer, Dr. L. H. Humphrey, of Silver Springs. It was decided by vote to change the name of the association to *The Wyoming County Medical Society*, in conformity with instructions from the secretary of the New York State Medical Society, of which the society becomes a part under the amalgamation of the two State societies. In the scientific session the following programme, consisting of a Symposium on Rheumatism, divided as follows, was presented: *Ætiology*, by Dr. Z. G. Truesdell; *Morbid Anatomy and Symptoms*, by Dr. L. C. Broughton; *Complications and Sequelæ*, by Dr. G. S. Skiff; *Differential Diagnosis*, by Dr. M. J. Wilson; *Treatment*, by Dr. P. S. Goodwin.

Concerning the Gibbs Memorial Prize of the New York Academy of Medicine.—In addition to and as a partial correction of the statements published in the early December issues (1905) of all the large medical weeklies of the United States concerning the Gibbs Memorial Prize Essays on the *Ætiology, Pathology, and Treatment of the Diseases of the Kidneys*, the trustees of the New York Academy of Medicine beg leave to announce: 1st. The prize amounts to two thousand dollars, this time. 2nd. The prize essays may be handed in on October 1st (not January 1st), 1907, or before that date. 3rd. The Prize Committee does not expect the *ætiology, pathology, and treatment of the diseases of the kidneys* to be discussed with equal completeness, but will be satisfied with the thorough scientific consideration of part of the problem, provided an essay offered in competition contains new facts or discoveries, or points of view of sufficient merit. For the New York Academy of Medicine, A. Jacobi, M. D., Chairman of the Trustees; A. M. Jacobus, M. D., Secretary.

The Centennial Celebration of the New York State Medical Society.—Among those who are expected to address the society on the occasion of its centennial celebration at Albany, on January 30 and 31, and February 1, 1906, are the Hon. Grover Cleveland, former President of the United States; Dr. Samuel B. Ward, of Albany; Dr. Roswell Park, of Buffalo; Dr. Herman M. Biggs, of New York; Dr. William H. Welch, of Johns Hopkins University, Baltimore; Dr. William Osler, of Oxford, England; Dr. Abraham Jacobi, of New York, and Dr. Frank Billings, of Chicago. The business sessions of the society will be held at Odd Fellows' hall, but the addresses will be delivered in the Emanuel Baptist Church. The annual banquet will be held in Odd Fellows' hall, on the night of January 31st, and will be a notable occasion. Among the distinguished guests who have signified their intention of being present are Governor Higgins, Hon. Grover Cleveland, Dr. William Osler, Dr. W. W. Keen, Dr. L. S. McMurtry, Dr. J. H. Musser, Dr. C. A. L. Reed, and Dr. Howard A. Kelly. The tickets, including wine, will cost \$5.00, and as the number is strictly limited to five hundred, applications should be made as early as possible to Dr. William J. Nellis, 210 State Street, Albany, N. Y.

The New York Academy of Medicine.—The programme for a meeting held on Thursday, January 18th, was as follows: Paper: *The Treatment of Graves's Disease by a Specific Cytotoxin*, by Dr. John Rogers; Paper: *The Preparation of a Specific Typhoid Cytotoxin*, by S. P. Beebe, Ph. D.; Symposium on the Sale and Use of Secret Medicines, and on the Impure Drugs of the Shops, with Presentations of Resolutions; speakers: Dr. George L. Peabody, Dr. A. Jacobi, Dr. W. Gilman Thompson, Dr. E. Eliot Harris, Dr. H. M. Biggs and others.

The Section in Ophthalmology held a meeting on Monday, January 15th, for which the following programme was prepared: Annual election of officers; presentation of in-

struments: An Apparatus for Accurately Plotting Central Scotomata, the Field of Fixation, and the Field of Single Vision, by Dr. Alexander Duane. Presentation of cases: (a) Case of Operation for Secondary Cataract; (b) Case with Two Ciliæ in the Anterior Chamber, by Dr. T. R. Pooley; (c) Case of Fistula of the Cornea Successfully Closed by a Plastic Operation, by Dr. J. E. Weeks; (d) Case of Melanosarcoma of the Chorioid with Recurrence in the Orbit After Enucleation, by Dr. E. L. Oatman; (e) Case of Cyst of the Iris, by Dr. Robert G. Reese; Paper: Concerning the Value of the Visual Field Phenomena in the Investigation of Certain Neuroses and Psychoses, by Dr. G. E. de Schweinitz, of Philadelphia; Paper: Congenital Word-Blindness in the Pupils of the Public Schools, by A. Schapinger.

The Section in Medicine met on Tuesday, January 16th, with the following order: Presentation of cases and specimens. Clinical Reports: (a) A Case of Typhoid Complicated in its Prodromal Stage by Jaundice, by Dr. Warren Coleman; (b) A Case of Purpura, by Dr. T. Stuart Hart; Paper: A Report on the Clinical Chemistry of the Blood in Various Diseases, by Dr. H. S. Carter; discussion opened by Dr. George A. Tuttle. Paper: Some Relations of Chronic Intestinal Putrefaction to the Severe Anæmias, by Dr. C. A. Herter; discussion opened by Dr. B. K. Dunham; election of officers.

The Section in Genitourinary Diseases held a meeting on Wednesday, 17th, with the following programme: Presentation of Patients and Specimens: (a) Nephrectomy for Tuberculous Kidney. Specimen, by Dr. Follen Cabot; (b) Six Cases of Stone in the Urinary Tract, by Dr. F. Tilden Brown; (c) A Case of Ureteral Calculus Two Centimetres from the Vesical End of the Ureter. A Case of Calculous Pyelonephritis, by Dr. Albert A. Berg; (d) A Case of Prostatectomy, by Dr. C. H. Chetwood; (e) Torsion of the Spermatic Cord. Infarct of Testis. Contracted Bladder, by Dr. Martin Ware. Presentation of Instruments. Reports of Cases: A Case of Prostatectomy Complicated by Vesical Calculus. A Case of Hæmaturia Due to a Vesical Tuberculous Lesion, by Dr. Eugene Fuller; Unfinished Discussion of Last Section Meeting. (a) The Surgical Treatment of Renal Calculus, by Dr. Ramon Guiteras; (b) The Surgical Treatment of Vesical Calculus, by Dr. William K. Otis.

The Section in Orthopaedic Surgery held a meeting on Friday, January 19th, with the following order: Presentation of Patients. Paper: Syphilitic Arthritis, by Dr. H. W. Frauenthal; discussion by Dr. L. Duncan Bulkley, Dr. R. W. Taylor, Dr. C. F. Painter, of Boston, Mass.; Dr. J. E. Weeks, Dr. A. Edward Davis, Dr. H. Koplik, Dr. C. G. Kerley, Dr. Willy Meyer, and Dr. J. F. Erdmann; Demonstration of Spirochetæ Under the Microscope, by Dr. B. Lapowski.

The Section in Laryngology and Rhinology will hold a meeting on Wednesday, January 24th. The following programme will be presented: Presentation of Patients. (a) Myxomatous Polyp of Inferior Turbinate in Extreme Youth, by Dr. W. C. Phillips; (b) Case Illustrative of the After Effects of the Free Use of the Galvano-Cautery, by Dr. T. J. Harris; (c) Frontal Sinus Operation, by Dr. T. P. Berens. Paper: Œdema of the Larynx, by Dr. Harmon Smith; discussion by Dr. C. C. Rice, Dr. J. E. Newcomb, and others. Presentation of Specimens and New Instruments: Instruments for Submucous Resection of Sæptum, by Dr. W. W. Carter; executive session.

The Section in Obstetrics and Gynaecology will meet on Thursday, January 25th, with the following order: Presentation of Specimens. Paper: A Comparative Study of the Various Methods of Terminating Pregnancy and Labor, by Dr. S. Marx; Paper: The pelvis in Obstetrics and a New Instrument for Measuring its Diameter in the Living Woman, by Dr. Sidney D. Jacobus; discussion by Dr. Grandin, Dr. Boldt, Dr. Brettauer, Dr. Stone, and others; election of officers.

Society Meetings for the Coming Week:

MONDAY, January 22nd.—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, January 23rd.—New York Medical Union (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in

Obstetrics and Gynecology); Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, January 24th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private).

THURSDAY, January 25th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopædic Society; New York Celtic Medical Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, January 26th.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, January 27th.—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending January 13, 1906:

	January 13.		January 6.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	1,211	15	1,131	16
Diphtheria and croup	371	62	337	50
Scarlet fever.....	222	7	215	13
Smallpox	2	..	..	..
Chickenpox	205	..	155	..
Tuberculosis	347	173	342	150
Typhoid fever.....	32	6	40	11
Cerebrospinal meningitis.....	23	26	15	11
	2,466	289	2,235	251

PHILADELPHIA AND THE MIDDLE STATES

Change of Address.—The Pennsylvania Orthopædic Institute and School of Mechanotherapy has removed to No. 1711 Green street.

The Union (N. J.) County Medical Society.—The regular quarterly meeting was held at Elizabeth, on Wednesday, January 10th. The programme included a paper on Intratracheal Injections, by Dr. Norton L. Wilson, of Elizabeth.

The Elizabeth (N. J.) Medical Club held its monthly meeting on Tuesday, January 9th. A paper on The Use and Abuse of Hypnotism was read by Dr. Theodore F. Livengood.

The Atlantic City (N. J.) Academy of Medicine.—At the annual meeting of this academy the following officers were elected: President, Dr. W. E. Darnall; vice-president, Dr. D. A. Berner; secretary, Dr. W. P. Conaway; treasurer, Dr. J. A. Joy; board of governors, Dr. Edward Guion and Dr. Emery Marvel.

The Atlantic (N. J.) County Medical Society held its annual meeting at Atlantic City on Friday, January 12th. The election of officers resulted as follows: President, Dr. E. C. Chew; vice-president, Dr. E. H. Harvey; secretary and treasurer, Dr. Edward Guion; reporter, Dr. A. B. Shimer; permanent delegate to the State Medical Society, Dr. Emery Marvel; annual delegates, Dr. D. A. Berner and Dr. George Scott.

The Orange (N. J.) Mountain Medical Society.—The annual meeting was held at Orange on Friday, January 12th. Officers for the ensuing year were elected as follows: President, Dr. D. E. English; vice-president, Dr. W. H. Van Gieson; secretary, Dr. R. D. Freeman; treasurer, Dr. J. M. Maghee; executive committee, Dr. M. Runyon and Dr. R. P. Francis; censors, Dr. R. C. Newton, Dr. W. B. Graves, and Dr. J. H. Bradshaw; reporter, Dr. H. A. Pulsford.

Scientific Society Meetings in Philadelphia for the Week Ending January 27, 1906.—Monday, January 22nd: Mineralogical and Geological Section, Academy of Natural Sciences; Society of Normal and Pathological Physiology, University of Pennsylvania. Tuesday, January 23rd: Medico Legal Society; Philadelphia Neurological Society. Wednesday, January 24th: Philadelphia County Medical

Society. Thursday, January 25th: Pathological Society; Entomological Section, Academy of Natural Sciences; Section Meeting, Franklin Institute. Friday, January 26th: South Branch, Philadelphia County Medical Society; Northern Medical Association.

The Section in Gynecology of the College of Physicians of Philadelphia.—At a meeting held on Thursday, January 18th, Dr. Robert T. Morris, of New York city, was to read a paper entitled A General Surgeon's Views on Some Pelvic Conditions in Women. The following gentlemen were expected to take part in the discussion: Dr. J. G. Clark, Dr. E. E. Montgomery, Dr. C. P. Noble, Dr. B. C. Hirst, Dr. T. R. Neilson, Dr. J. M. Baldy, and Dr. John B. Deaver. The regular yearly meeting for the transaction of business and election of the officers for the ensuing year has been deferred by order of the executive committee until the February meeting.

Advertising by Hospital Physicians.—At the meeting of the Philadelphia County Medical Society, on December 27, 1905, the following resolutions were referred to the directors, with instructions to report thereon at the business meeting of January 17, 1906: Resolved, That if the advertisements in public prints of hospitals and dispensaries, soliciting patients, bear the names, with or without addresses, of any of the attending staff of physicians, such action shall be deemed a violation of Section 7, Article 1, Chapter II, of the Principles of Medical Ethics of the American Medical Association. The said section is entitled "Advertising Methods to be Avoided." Resolved, That unless the physician or physicians implicated shall promptly disavow responsibility for such advertisement and proceed to prevent such, the offender or offenders shall be liable to be suspended from the Philadelphia County Medical Society for one year. Resolved, That these resolutions shall appear in each meeting notice of the society until and including that for the business meeting of January 16, 1906.

The Pennsylvania Orthopædic Institute.—Among the nurses who graduated last week at the Pennsylvania Orthopædic Institute (Incorp.), 1711 Green street, Philadelphia, in the Swedish system of massage, medical and orthopædic gymnastics and electricity are: Miss Katie A. Grover (graduate Relief Society Training School, 1901, Salt Lake City), Salt Lake City, Utah; Miss Alice A. Stanton and Miss Sarah A. Stanton (both graduates Brooks Memorial Hospital, Dunkirk, N. Y.; 1904; post-graduate Boston Floating Hospital and New York Nursery and Child's Hospital, New York, 1905), St. Thomas, Ontario, Canada; Miss Catherine Campbell (graduate Sarnia General Hospital, 1901, Sarnia, Ontario; for two years with the Victorian Order of Nurses for Canada at British Columbia; post-graduate Woman's Hospital and Infant's Home, Detroit, Mich., 1905), Avon, Ontario, Canada; Miss Clara F. Elliott (graduate Sarnia General Hospital, 1901), Sarnia, Ontario, Canada; Miss Louise Morstatt (graduate Flushing Hospital, Flushing, L. I., 1901), Miss Foote's Directory, New York.

Smallpox at Tamaqua, Pa.—The smallpox epidemic at Tamaqua, Pa., has assumed serious proportions. Public schools, places of amusement, and churches have been ordered closed by the board of health, and all lodge and society meetings have been ordered omitted. The church people have made a demand that saloons be also closed. A corps of physicians will make a house-to-house canvass for the purpose of vaccinating all those who have not been successfully vaccinated within the last two years. A nurse who has had extensive experience in the care of smallpox patients has been engaged to take charge of the hospital. On January 13 the commissioner of health gave out a statement in the nature of an interview which has appeared in many of the newspapers. Referring to the question of vaccination he said: That portion of our people who are opposed to vaccination would do well to pause to consider to what extent the money which they contribute to the State in the way of taxes is used up in the management of epidemics of smallpox. And that portion who cheerfully submit to that simple operation, and in that way protect themselves and the community against outbreaks of that disease would do well to consider how far they are willing to have the money which they contribute to the support of the State consumed in this way in order to allow a few obstinate fanatics to indulge their pet fancy of being allowed to have smallpox if they so desire. Probably

the most efficient means for inducing these recalcitrants to reconsider their opposition to the law would be to assess a special tax on them which should be devoted entirely to defraying the expenses incurred by the department of health of the State and those of the cities and boroughs in the care of smallpox cases, the enforcement of quarantine, the construction of smallpox hospitals, and maintenance of those in quarantine. Manifestly it is an injustice of the grossest kind that the lawabiding and intelligent portion of the community should be obliged to shoulder an expense due to the obstinate refusal to obey the law on the part of a small minority of law breakers.

BOSTON AND NEW ENGLAND.

The Rutland (Vt.) County Medical and Surgical Society held a meeting at Rutland on Tuesday, January 9th. The programme included a paper by Dr. M. R. Crain on *The Opportunities for Physicians in the Country Against the City*; a paper on *Recent Cases of Diphtheria*, and one on *The Chloride of Lime Solution in Septicæmia*, by Dr. A. M. Bellrose.

The Maine Academy of Medicine and Science.—The seventy-third stated meeting of the academy was held at Portland, on Wednesday, January 10th. The programme included the following titles: *Anæsthesia*, by Dr. P. W. Davis, of Portland; *Athletics*, by Dr. S. G. Gordon, of Portland; *Pneumonia*, by Dr. H. S. Emery, of Portland. General discussion.

Infectious Diseases in Vermont During the Year 1905.—Records compiled by the secretary of the State board of health show that the communicable diseases recorded upon the books of the various town officials reach a total of 6,581. These were divided as follows: *Diphtheria*, 422; *measles*, 4,436; *cerebrospinal meningitis*, 16; *scarlet fever*, 422; *typhoid fever*, 301; *whooping cough*, 984; *smallpox*, 2. The mortality was small.

The Maine Journal of Medicine and Science.—This Journal, that for ten years has been the official organ of the Maine Academy of Medicine and Science, has been obliged to discontinue publication because of the great falling off in the membership of the academy. In consequence of this falling off, it is doubtful if the meetings of the academy are continued. This question will be decided at the meeting of the academy in February.

The Mortality of Connecticut.—According to the State Board of Health's *Monthly Bulletin* for December, 1905, the total number of deaths during the month was 1,318. This was 61 more than in November, and 60 more than in December of last year, and 83 more than the average number of deaths during December for the five years preceding. The death rate was 16.3 for the large towns, for the small towns 15.2, and for the whole State 16.0. The deaths reported from infectious diseases were 223, being 16.9 per cent. of the total mortality.

The Mortality of Boston.—The number of deaths reported to the board of health for the week ending January 13th was 198, as against 232 the corresponding week last year, showing a decrease of 34 deaths and making the death rate for the week 17.35. The number of cases and deaths from infectious diseases was as follows: *Diphtheria*, 43 cases, 3 deaths; *scarlatina*, 31 cases, 1 death; *typhoid fever*, 11 cases, 5 deaths; *measles*, 118 cases, 3 deaths; *tuberculosis*, 41 cases, 15 deaths; *smallpox*, no cases, no deaths. The deaths from pneumonia were 45, whooping cough none, heart disease 15, bronchitis 9, marasmus 3. There were 7 deaths from violent causes. The number of children who died under one year of age was 40, under five years of age 66, persons over sixty years 42, deaths in public institutions 58.

The Hampshire (Mass.) District Medical Society held a meeting at Springfield on Wednesday, January 10th. Dr. A. M. Belden gave a report as chairman of a committee, comprising Dr. Belden, Dr. Minshall, and Dr. Hanson, which had been appointed by the Hampshire society, acting in unison with the other societies of the State, to consider methods of prevention and cure of tuberculosis. Dr. Belden's report was largely a report of a meeting of the chairmen of the various committees. He said that the Northampton board of health, under the chairmanship of Dr. E. W. Brown, was following effective methods in respect to this matter. He strongly urged the advantage that might be gained in the fight against tuberculosis by

the employment of a district nurse to serve in families which could not afford to employ a professional nurse.

BALTIMORE AND THE SOUTH.

The Chatham (Ga.) County Medical Society.—The monthly meeting of the society was held at Savannah, on Wednesday, January 10th. A paper on *Pneumonia* was read by Dr. Ralston Lattimer.

The Richmond (Va.) Academy of Medicine and Surgery.—The next meeting of this academy will be held on Tuesday, January 23rd. The subject for discussion will be *Habitual Constipation*; the discussion to be opened by Dr. Mark W. Peyser.

The St. Louis Medical Society of Missouri.—At the annual meeting, held on Tuesday, January 9th, the following officers were elected: President, Dr. George Homan; vice-president, Dr. Robert Barclay; recording secretary, Dr. Hart Goodloe; corresponding secretary, Dr. Edmund A. Babler; treasurer, Dr. Charles J. Orr.

The Georgia Medical Society of Savannah held its annual meeting on Tuesday, January 9th. The following officers were elected: President, Dr. B. P. Oliveros; vice-president, Dr. Jabez Jones; recording secretary, Dr. John X. Train; corresponding secretary, Dr. J. A. Crowther; treasurer, Dr. W. W. Owens.

The Louisiana State Medical Society.—Pursuant to a call for a special meeting, the society will meet at New Orleans on February 6, 1906, to consider the yellow fever question and to frame recommendations for necessary changes in the existing health laws, to be submitted to the legislature at its next session. The regular annual meeting of the society will be held at New Orleans on May 8, 9, and 10, 1906.

The Kentucky Midland Medical Society.—A quarterly meeting was held at Louisville, on Thursday, January 11th. The following officers were elected for the ensuing year: President, Dr. W. B. McClure, of Lexington; vice-president, Dr. C. W. Kavanaugh, of Lawrenceburg; secretary and treasurer, Dr. J. H. Arnold, of Versailles. The principal feature of the programme was the reading of a paper by Dr. Charles G. Daugherty, of Paris, Ky.

The Memphis and Shelby (Tenn.) County Medical Society held its regular meeting at Memphis on Tuesday, January 2nd. The programme included the following: *Certain Mastoid Operations*, by Dr. E. C. Ellett, of Memphis. Dr. William Krauss, of Memphis, gave demonstrations of the value of the x ray treatment of malignant tissue. Dr. J. W. Price reported a case of ossification of the choroid and floating cataract, due to a bird shot embedded in the eye for a period of eleven years.

The Board of Regular Medical Examiners for the State of Maryland.—Thirty-one of the sixty persons who took the State medical examination in December, 1905, passed successfully and will be given certificates by the State board of medical examiners as physicians and surgeons. The medical examining board is composed of the following: President, Dr. Herbert Harlan, of Baltimore; secretary and treasurer, Dr. J. McPherson Scott, of Hagerstown; Dr. Franklin B. Smith, Frederick; Dr. William Dabney, Baltimore; Dr. B. W. Goldsborough, Cambridge; Dr. Edwin J. Dirickson, Berlin; Dr. James A. Stevens, Oxford; Dr. Lewis A. Griffith, Upper Marlboro.

The Therapeutic Society of the District of Columbia held its annual meeting at Washington, on Saturday, January 14th. The election of officers resulted as follows: President, Dr. N. P. Barnes; first vice-president, Dr. Harry A. Robbins; second vice-president, Dr. Edwin W. Watkins; recording and corresponding secretary, Dr. Arthur J. Hall; treasurer, Dr. J. S. McLain; librarian and curator, Dr. E. L. Morgan; board of censors, Dr. Frank Leech, Dr. Charles M. Beall, and Dr. J. W. Chappell. According to custom, the retiring president, Dr. D. Olin Leech, read a paper in which he took up the progress which had been made during the year in the line of therapeutics. His remarks showed clearly that the year 1905 will go down as an important one in medical history, as it has been characterized with strong fighting against the white plague and the development of cures for that terrible disease.

CHICAGO AND THE WEST.

The Iowa and Illinois Central District Medical Association.—The programme for a meeting, held at Davenport, Ia., on Thursday, January 11th, included a paper on

The Surgical and Medical Treatment of Gastric Diseases. by Dr. Fenton B. Turcks, of Chicago.

The Milwaukee (Wis.) Medical Society held its annual meeting on Tuesday, January 9th, and elected officers as follows: President, Dr. H. V. Ogden; vice-presidents, Dr. A. J. Patek and Dr. G. P. Barth; secretary, Dr. H. E. Dearholt; treasurer, Dr. R. C. Brown; librarian, Dr. A. W. Myers.

The Eastern Colorado Medical Society held a meeting at Wray on Wednesday, January 10th. The following officers were elected for the ensuing year: President, Dr. Earl D. McGill, of Wray; vice-presidents, Dr. W. E. Turner, of Brush, and Dr. G. B. Billsborrow, of Yuma; secretary, Dr. S. S. Bootay, of Arkon; treasurer, Dr. N. J. Phelan, of Denver.

The Nicolet and Le Sueur (Minn.) Counties Medical Society held its annual meeting at Le Sueur, on Wednesday, January 10th. Papers were read by Dr. H. B. Aitkins, of Le Sueur Centre, and Dr. J. W. Daniels, of St. Peter. Officers were elected as follows: President, Dr. J. W. Daniels, of St. Peter; vice-president, Dr. J. L. Thiesen, of Henderson; secretary, Dr. Joseph Le Clerc, of Le Sueur; treasurer, Dr. D. A. Kirk, of Le Sueur; delegate to the State society, Dr. G. M. Merritt, of St. Peter. The next meeting of the society will be held at St. Peter in September, 1906.

The Wisconsin Board of Medical Examiners. At a meeting held at Milwaukee on Monday, January 8th, steps were taken for a reorganization of the board. The old State board met and finished up business before it, and turned its affairs over to the new board. Dr. J. R. Currens, Two Rivers, and Dr. Filip Forsbeck, Milwaukee, are the retiring members. As now constituted the board consists of Dr. A. P. Andrus, Ashland, president, and Dr. M. A. Brandt and Dr. P. H. McGovern, Milwaukee; Dr. W. G. Serles, Sparta; Dr. J. V. Stevens, secretary, Jefferson; Dr. A. U. Jorris, La Crosse; Dr. L. F. Bennett, Beloit, and Dr. F. P. Klahr, Horicon.

Mortality of Michigan During December, 1905.—The total number of deaths returned to the Department of State for the month of December was 2,683, representing a total death rate of 12.4 in 1,000 population, as compared with a rate of 12.6 for the preceding month. There were 435 deaths of infants under 1 year of age, 166 deaths of children aged 1 to 4 years, inclusive, and 896 deaths of persons aged 65 years and over. Important causes of death were as follows: Tuberculosis of the lungs, 179; other forms of tuberculosis, 31; typhoid fever, 54, a marked decrease from the preceding month, which had 93 deaths; diphtheria and croup, 66; scarlet fever, 18; measles, 10; whooping cough, 16; pneumonia, 228, as compared with 187 for the preceding month; diarrhoeal diseases of infants under 2 years of age, 36; influenza, 23; cancer, 123, and violence, including accidents, 167. There were no deaths from smallpox reported during the month.

The Columbus (O.) Academy of Medicine.—At the annual meeting of the academy of medicine the following officers were elected: President, Dr. James U. Barnhill; vice-president, Dr. S. J. Goodman; secretary, Dr. Charles J. Shepard (reelected); treasurer, Dr. William C. Davis (reelected); censor, Dr. J. A. Frame; delegate to the House of Delegates of the State association, Dr. J. H. J. Upham. The secretary's report showed that twenty meetings had been held within the year, with an average attendance of fifty-eight. New members for the year, thirty-seven. Present membership, two hundred and twelve. Papers read, thirty-four; surgical fourteen, medical seventeen, ethical three. Specimens presented, twenty-six. Cases reported, eleven; cases presented, three. The executive committee in its annual report urged the establishment of a permanent home for the academy, including a reading room and library in which its members might "enjoy the privacy and conveniences demanded by the character of their work, and by which it would more fittingly uphold the importance and dignity of the medical profession in the community." Dr. F. F. Lawrence, the retiring president, in appropriate remarks, presented Dr. D. N. Kinsman, the first president of the academy, with a gold headed cane as a small token of the esteem in which the latter is held by his professional friends.

Statement of Mortality in Chicago for the Week Ending January 13, 1906, compared with the preceding week and with the corresponding week of 1905. Death rates com-

puted on United States Census Bureau's midyear populations—2,049,185 for 1906, 1,990,750 for 1905:

	Jan. 13, 1906	Jan. 6, 1906	Jan. 14, 1905
Total deaths, all causes	582	562	542
Annual death rate in 1,000	14.80	14.31	14.19
Sexes—			
Males	338	320	300
Females	244	242	242
Ages—			
Under 1 year of age	107	93	106
Between 1 and 5 years of age	38	43	39
Between 5 and 20 years of age	36	31	38
Between 20 and 60 years of age	282	260	232
Over 60 years of age	119	135	127
Important causes of death—			
Apoplexy	16	16	24
Bright's disease	44	51	31
Bronchitis	19	14	24
Consumption	66	71	52
Cancer	24	29	23
Convulsions	9	8	16
Diphtheria	11	11	11
Heart diseases	40	32	32
Influenza	4	4	20
Intestinal diseases, acute	27	17	20
Measles	0	1	2
Nervous diseases	16	18	13
Pneumonia	114	102	108
Scarlet fever	8	3	2
Smallpox	0	0	1
Suicide	14	8	13
Typhoid fever	9	4	7
Violence (other than suicide)	38	40	25
Whooping cough	1	0	4
All other causes	122	130	111

The Philippine Journal of Science is the name of a publication issued at Manila by the Bureau of Science of the Government of the Philippine Islands. It is edited by Dr. Paul C. Freer, director of the bureau, assisted by Dr. Richard P. Strong, chief of the biological laboratory, and H. D. McCaskey, B. S., chief of the division of geology and mining. The Journal takes the place of the *Bulletin of the Bureau of Government Laboratories*, heretofore issued by the bureau. The publication will include original articles by the members of the staff of the bureau of science, as well as scientific papers by other officials of the Government.

The Medical Society of the Mediterranean Seaboard.—At the last meeting of the society for 1905, held at Nice, officers were elected for 1906 as follows: President, Dr. Guiter, of Cannes; vice-presidents, Dr. Vivant, of Monte Carlo; Dr. Moriez, of Nice; Dr. Barety, of Nice; and Dr. Sardou, of Nice; secretary general, Dr. Hérard de Bessé, of Baulieu; treasurer, Dr. Bonnal, of Nice; recorder, Dr. Ardoin, of Nice; secretaries, Dr. Mignon, of Nice; Dr. Gilli, of Nice; and Dr. Bienfait, of Cannes.

A Tribute to Dr. Fletcher.—Last Thursday there was a notable gathering in Washington to do honor to Dr. Robert Fletcher, so well and universally known as associate editor and subsequent editor in chief of the *Index Catalogue of the Library of the Surgeon General's Office, United States Army*, and of the *Index Medicus*. Dr. Fletcher was presented with a loving cup at this dinner. Among the speakers were: Dr. John S. Billings, of New York, who spoke on The Army Medical Library; Dr. W. S. Thayer, of Baltimore, who read a poem; and Dr. W. D. McCaw, of the army, who spoke on the Army Medical Service. Dr. W. W. Keen, of Philadelphia, made the presentation speech, to which Dr. Fletcher responded. Dr. H. W. Wiley, of Washington, spoke in a humorous vein of the Perils and Dangers of the Loving Cup. Dr. William Osler, of Oxford, England, and Dr. A. F. A. King, of Washington, spoke of Our Guest as Physician, Scholar, and Companion. Among other noted medical men who were present were: Dr. Thomas B. F. Fletcher, Dr. Henry M. Hurd, Dr. Howard A. Kelly, and Dr. William S. Halsted, of Baltimore; Dr. James Tyson, of Philadelphia; Dr. Abraham Jacobi, of New York; Dr. William H. Welch, of Baltimore; and Dr. Shattuck, of Boston. Dr. Fletcher is a native of England, and received his medical education at the London Hospital, but came to this country and practised in Cincinnati. He served with honor through the civil war, being commissioned as surgeon of the United States Volunteers and breveted colonel. In 1876 he began assisting in the charge of the library in the surgeon general's office, and has since carried on the most extensive task ever attempted in medical bibliography in the *Index Catalogue* of that library. He also edited, first with Dr. Billings and later as editor in chief, the *Index Medicus*, which each month gave a bibliography of the current medical literature of the world.

Pith of Current Literature.

AMERICAN MEDICINE.

January 13, 1906.

1. Should the Youth of this Country be Instructed in a Knowledge of Sexual Physiology and Hygiene?
By PRINCE A. MORROW.
2. The Medical Treatment of Abdominal Pain not of Gastric Origin,
By JAMES E. TALLEY.
3. A Case of Cerebellar Tumor,
By BURTON CHANCE.
4. A Young Stage of the American Hookworm—*Necator americanus* (Stiles, 1902)—Eight to Twelve Days After Skin Infection in Rabbits and Dogs,
By CHARLES WARDELL STILES and JOSEPH GOLDBERGER.
5. Subcutaneous Pelvioutral Lumbar Implantation, in Lieu of Ureterectomy after Nephrectomy,
By E. ERNEST GALLANT.
6. Deception and Falsehood as Pathological Phenomena,
By ALFRED GORDON.

4. A Young Stage of the American Hookworm—*Necator americanus* (Stiles, 1902)—8 to 12 Days After Skin Infection in Rabbits and Dogs.—Stiles and Goldberger describe their observations of *Necator americanus* which combined with Stiles's former report, are as follows: 1. Eggs may hatch the rhabditiform embryo in less than twenty-four hours. The first stage (rhabditiform embryo) may be found in first ecdysis two or three days after hatching; the second stage may be found in second ecdysis seven to nine days after hatching of first stage from the egg. This is the infecting stage. The third stage, namely, that resulting from the second ecdysis, has not yet been observed in the body. The fourth stage occurs eight to twelve days after infection. These worms must next undergo a fourth ecdysis, during which the sexes will become differentiated. The fifth stage develops directly to the adult form. They conclude that: Dogs and rabbits can be experimentally infected with a young intestinal stage of the American hookworm, which when placed upon the skin of the back penetrates the skin and reaches the stomach and small intestine in eight to twelve days. Although rabbits and dogs may be infected there is no evidence that these animals play a role in the spread of incineriasis in man.

6. Deception and Falsehood as Pathological Phenomena.—Gordon says that vanity, moral perversity, and a certain deception are symptoms of a pathological condition; they are closely allied to the mental degeneracy and loss of psychic equilibrium and are manifestations of the so called moral insanity. But there is also a certain relationship between these symptoms and hysteria. Suggestibility, autosuggestion, simulation, are all met in this great group of neuroses, but they are usually produced involuntarily or unconsciously, while vicious tendencies, falsehood, deception and simulation, accomplished intuitively and consciously, belong to an entirely different order of psychic disturbances than hysteria.

THE BOSTON MEDICAL AND SURGICAL JOURNAL

January 11, 1906.

1. Analysis of the One Hundred and Twenty Cases of Malaria Occurring at Camp Gregg, Philippine Islands,
By WESTON P. CHAMBERLAIN.
2. A Report of Three Cases of Perforated Gastric Ulcer; Gastroenterostomy,
By DANIEL FISKE JONES.
3. Shoes and Feet,
By ROBERT SOUTTER.
4. Dazzling Health Statistics,
By THOMAS J. MAYES.

1. Analysis of One Hundred and Twenty Cases of Malaria Occurring at Camp Gregg, Philippine Islands.—Captain Chamberlain deduces from his observations of the one hundred and twenty cases of malarial fever at Camp Gregg, Philippine Islands that: 1. The great prevalence of malaria in 1904 was probably due to the presence of a remarkably large number of mosquitoes of the genus *anopheles*. The possibility of drinking

water infection can almost certainly be excluded. 2. The abundance of mosquitoes in the post resulted from the close approach of the jungle, rendering the location and treatment of breeding pools impossible. 3. The dangerous character of these pools was augmented by the long continued wet season and intermittent occurrence of the showers and absence of many heavy rain storms. 4. The prevalence of malaria increased as the season advanced. 5. The quartan infections were infrequent in this vicinity. 6. Pernicious malaria did not occur at this post, probably because of thorough and prolonged treatment of the primary infection. 7. Quinine sulphate in solution, 0.5 gramme, three or even four times a week, will not in all cases prevent infection or relapse. 8. Malarial infection both benign and malignant existing for several days without chills or chilliness, but with marked periodical febrile paroxysms were by no means infrequent. 9. Clinically the estivo-autumnal infections could be divided into remittent (35 per cent.), quotidian intermittent (25 per cent.), and tertian intermittent (40 per cent.). 10. No distinctive differences were observed in the parasites in the estivo-autumnal infections. 11. Nausea, vomiting, and abdominal pain at times of paroxysm were extremely common.

2. A Report of Three Cases of Perforated Gastric Ulcer; Gastroenterostomy.—Jones reports three cases of perforations of chronic ulcers, occurring in the midst of a large indurated and thickened area which made it impossible to close the perforation by sutures with any degree of security. Furthermore, the situation of the ulcers and the extent of the stomach wall involved by the chronic inflammatory process made resection impossible without resection of the pylorus. Gastroenterostomy was made in all three cases, one with the Murphy button, two by simple suture. The Murphy button proved unsatisfactory, probably on account of the poor general condition of the patient and the condition of the secretions. All three cases recovered from the immediate effects of the operation, but one patient died in three weeks of exhaustion.

3. Shoes and Feet.—Soutter says that the chief fault of the present method of shoe making is that the shoe is made for an astragalo calcaneus vulgus. It is impossible to adduct the front of the foot satisfactorily or get a good line of the great toe until this is corrected. The style of the heel is at present that it should be on the outside as high or higher than the inside. This is wrong, too, as it causes abduction of the front of the foot. In order to make the foot admired it must be held in a position of strength, have the appearance of health and be free from signs of abuse. It can be noticed on the street how few people walk unconscious of their feet and how many awkwardly because of shoes. The relation of the foot and leg in carrying the body weight is important.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 13, 1906.

1. The Pathology of the Kidneys. Some General Considerations,
By W. T. COUNCILMAN.
2. The Relation of the Kidneys to Eclampsia,
By PHILIP KING BROWN.
3. Cylindruria (Concluded),
By CHARLES P. EMERSON.
4. Canalization of the Sigmoid, the Lateral and a Portion of the Superior Longitudinal Sinuses for Mastoiditis of Twenty-one Years' Standing, with Subsequent Reestablishment of a Temperomandibular Joint,
By BAYARD HOLMES.
5. Hyperemesis Gravidarum,
By CHARLES ROSEWATER.
6. The Operative Treatment of Fractures (To be continued),
By JAMES A. KELLY.
7. Further Studies on Streptococcus Infection,
By GUSTAV F. RUEDIGER.
8. Paroxysmal Tachycardia: Its Relation to Exophthalmic Goitre,
By CARL C. WARDEN.
9. The Present Status of Therapeutics. By W. G. MOORE.

10. *Spirochetæ Obermeirii*,

By F. G. NOVY and R. E. KNAPP.

11. Indications for Strychnine and Nitroglycerin in Circulatory Disorders,

By ORRVILLE HARRY BROWN.

1. **The Pathology of the Kidney.**—Councilman remarks that judging from a careful routine examination of the kidneys in a large number of autopsies the most important conclusion is probably the fact that the lesions of the kidneys are only part of a whole. Almost invariably there are lesions in other organs, sometimes of the same general character as the lesions in the kidney, sometimes of a different character. We cannot consider kidney disease as an entity. The injuries which are produced in the kidneys are either due to agents which are formed in the body as a result of disease in other organs or they enter the body from without, affecting the kidneys secondarily. Even the simplest lesions due to the direct action of bacteria are secondary to infections elsewhere. The frequency of lesions, especially when the examination is by the microscope as well as by the naked eye, is striking. Anatomically it is not uncommon to find casts in a few tubules connected with foci of injury, the remainder of the tissue being perfectly normal. Comparing clinical reports of routine urine examinations with the results of routine necropsies, it often appears that too much importance may be attached to the presence of albumin and casts, though they always mean injury of the organ. Too much importance cannot be attached to the results of urinary examination directed to the ascertaining of kidney sufficiency.

2. **The Relation of the Kidneys to Eclampsia.**—

Brown has collected the statistics from hospitals, dispensaries, private sources, literature, and personal observations on eclampsia and kidney conditions. To this he adds his experiments on the muscular irritability of pregnant and non-pregnant guinea pigs. From 54,010 records of births he thinks that: 1. Albumin is present in fully 80 per cent. of normal pregnancies. 2. Albumin and casts are found in at least 30 per cent. of all pregnancies. 3. There is no reason to suppose that the renal condition thus revealed is the cause of eclampsia. That there is some connection, however, between the albuminuria and the extrarenal cause of the eclampsia is likely, in view of the nearly constant association of the two. 4. It has been shown that neither any normal end product nor any known intermediary product of metabolism is the cause of eclampsia. 5. It is reasonable to suppose that deficient thyroid or parathyroid activity plays a part, at least, in some of the cases of eclampsia. 6. There are probably several causal factors to the separate or concomitant action of which eclampsia seems to be due. 7. The most significant experimental work done up to this time points to the fact that in the placenta are formed the toxic substances which probably are responsible for eclampsia. There is good evidence that these same substances are, in all probability, the causes of the headache, oedema, abdominal pain, and particularly the albuminuria present in non-eclamptic and non-nephritic cases. 8. That the muscles of pregnant guinea pigs can be thrown into convulsion more easily than those of non-pregnant animals.

3. **Cylindruria.**—Emerson observes that casts alone are no index of the anatomical renal condition. Their most brilliant display is in non-nephritic condition; the most serious conditions in nephritis may be accompanied by few or none. The more normal the cells the better do they seem to form casts when disturbed; in chronic conditions the cells seem to become accustomed to their condition and to form few casts or none. The duration of the occurrence of casts is of great importance, and a given case may be well followed by the casts. Epithelial, blood, and pus casts are more common and of less significance than is usually supposed.

5. **Hyperemesis Gravidarum.**—Rosewater understands under the term hyperemesis gravidarum an aggravated uncontrollable form of vomiting of pregnant women which resists local as well as constitutional treatment, and which so reduces the patient's vitality that it very seriously endangers her life. A large number of these patients abort as the result of the irritation of the uterus caused by the violent fits of retching and vomiting. The only remedy is then the emptying of the uterus. He cites two cases; from these he concludes that when in pregnancy, for just and lawful reasons, the emptying of the uterus is resorted to, and during the operation improvement in the fundamental conditions supplying the excuse for the abortion occurs, it is the duty of the physician, if not too late, to cease in his attempt to cause abortion, and to make all efforts to save the child as well as the mother.

7. **Further Studies on Streptococcus Infections.**—

Ruediger states that human serum does not acquire streptococidal properties during the course of a streptococcus infection. The blister fluid from erysipelas patients has no streptococidal powers. Defibrinated human blood has a streptococidal power which, with few exceptions, is roughly proportional to the leucocytosis. The destruction of cocci in the defibrinated blood is brought about by the leucocytes, but before this can be accomplished the cocci must be acted on by the opsonin of the serum. There is no phagocytosis and hence no destruction of unsensitized cocci by washed leucocytes. The opsonin is increased during the course of an attack of erysipelas. In an attack of acute nephritis the opsonin is diminished, but the leucocytes also undergo a change which renders them less effective in the destruction of streptococci. This fact may serve to throw light on the cause of many terminal infections.

MEDICAL RECORD

January 13, 1906.

1. Observations on Nephroptosis and Nephropexy,
By ARNOLD STURMDORF.
2. The Rôle of Saline Solution in the Treatment of Pneumonia,
By J. MADISON TAYLOR.
3. An Inquiry Into the Scientific Principles which Underlie the Milk Feeding of Infants.
By THOMAS S. SOUTHWORTH.
4. Obstruction of the Pylorus,
By ROBERT HURTIN HALSEY.
5. Clinical Aspect of Rheumatic Endocarditis,
By JAMES D. MORGAN.
6. A Non-Operative Method of Treating Prostatitis,
By WILLIAM BENHAM SNOW.
7. A New Method of Treatment of Acne,
By ELI MOSCHOWITZ.

1. **Observations on Nephroptosis and Nephropexy.**

—Sturmdorf thinks the keynote in the therapeutics of nephroptosis is permanent fixation. This can be realized at the present time with certainty and comparative safety by the adoption of modern methods of nephropexy. The mortality of this operation in experienced hands is about equal to that of exploratory section, and its results must establish it as the legitimate procedure in the cure of nephroptosis.

4. **Obstruction of the Pylorus.**—Halsey reports seven cases of obstruction of the pylorus, four benign and three malignant, and observes the following: 1. A history of digestive disturbance extending over several years accompanies the non-malignant condition, while a perfect euphoria, followed by a few months of increasing difficulty, is associated with the malignant cases. 2. A stomach distended with food contents and in active peristalsis, has an obstruction at the outlet, whether a tumor can be felt or not. 3. An obstruction of the pylorus may be due to a tumor which can be felt in another than the right upper quadrant. 4. The presence of lactic acid and the Oppler-

Boas bacillus must not be interpreted to indicate the presence of a cancer; nor on the other hand, does the finding of free hydrochloric acid and sarcinæ contraindicate malignant disease. 5. Detention of food in the stomach can cause a suppression of the secretion of hydrochloric acid and permit the formation of lactic acid and the growth of Oppler-Boas bacilli. 6. The selection of treatment should depend upon the probable cause, as relief can be obtained in some cases without operation. In selecting the operation, pyloroplasty should have the preference when a choice is possible.

6. A Non-Operative Method of Treating Prostatitis.

—Snow divides prostatitis into acute, chronic, and complicated cases. The indication for the treatment of prostatitis of all except the infected and malignant types consists in the relief of the condition of local stasis and a restoration of circulation and the functions of the lymphatics and the other structures of the gland. The wave current is the method of treatment adopted by the author. The current is administered to the patient while lying upon his side, and holding the electrode with his hand firmly against the gland, or an especially designed electrode is placed on a chair upon which the patient sits. The static wave current from the positive side of the machine, the negative being grounded is the best electrical modality of his treatment, but the spark gap should not exceed four inches, as a rule two and a half to three inches is sufficient. This will be usually penetrating enough to affect the deeper structures of a very much hypertrophied gland. The promptness with which relief follows in these cases and the extent of it, is surprising to those who are not familiar with the method. Where simple congestion is present in the early stages of the affection, the relief is prompt. In glands enlarged for a number of years with resulting infiltration, irritation, and obstruction of the urethral passage, this is abated and the congestion relieved.

7. A New Method of Treatment of Acne.—Moscowitz applies the well known principle of Bier of inducing hyperæmia in inflammatory processes in the treatment of acne. An ordinary dry cup with rubber bulb attachment is applied to the affected area of the face for one hour every day, preferably in the evening. The suction must be of the slightest character, so that the least pull will separate the cup from the skin. The cup must be removed every one or two minutes and reapplied to permit of a new influx of blood. It usually takes from two to five applications over each area, until a satisfactory result is obtained.

BRITISH MEDICAL JOURNAL.

December 30, 1905.

1. A Preliminary Inquiry into the Tonicity of the Muscle Fibres of the Heart, By J. MACKENZIE.
2. Inebriety as a Physical Disease, By H. W. MANN.
3. Some Toxic Effects of Aspirin, By J. S. DOCKRAY.
4. A Peculiar Form of Acromegaly, Possibly Resulting from Injury, By J. C. P. PERRY.
5. Addison's Disease, By W. TIBBLES.
6. The Parathyroids in Graves's Disease, By S. G. SHATTOCK.
7. On the Pathogenic Ticks Concerned in the Distribution of Disease in Man, with Special Reference to the Differential Characters in *Ornithodoros Moubata*, By R. NEWSTEAD.
8. On the Ethics of a Prescription, By G. A. BATCHELOR.
9. Notes on a Case of Pneumothorax, By J. MCKIE.

1. Tonicity of the Heart Fibres.—Mackenzie directs attention to the explanation of a common cause of heart failure. Dilatation is not due to a mechanical distention of the chambers of the heart. Hearts whose walls are thinned, and whose muscle fibres are degenerated may continue to work against an abnormally high arterial pressure, and never show any signs

of dilatation. Dilatation of the left ventricle may occur even when the diastolic force filling the ventricle is greatly diminished, as in cases of pure mitral stenosis. Certain drugs increase the tonicity of the heart muscle, while others lessen it. The symptoms of depression of tonicity, besides dilatation of the heart, are "functional" murmurs, and regurgitation of blood from the heart to the veins. The most striking instances of depression of tonicity occur with failure of compensation in cases of valvular disease, the dilatation being the main evidence. Digitalis primarily increases the tonicity of the cardiac muscle. By restoring the tonicity in cases of dilatation the cavity of the heart is reduced to a size more fitted for the effective accomplishment of its contraction.

2. Inebriety.—Mann defines inebriety as an irresistible, uncontrollable, and periodic desire for alcohol. It is not thirst, and when present the appetite knows no satiety. Traumatism, concussion, shock, and injuries to the head all have a place in the causation of inebriety. It is frequently associated with epilepsy, also a periodic nerve disease. Its commonest association is with tuberculosis. Among its "moral" causes may be mentioned adversity, prosperity, imperfect or excessive education, ambition, worry, etc. Heredity has a prominent place in its ætiology. Alcohol is a direct nerve poison, affecting the cortical layers in the cerebrum, the cerebellum, and the peripheral nerve endings. The treatment by hypodermic injections of atropine combined with strychnine has, in the author's hands, proved of great value in relieving the intensity of the appetite, and when thoroughly pushed it does confer an indifference to alcohol. The dryness and thirst caused by atropine is a thirst for ordinary liquids, and not for intoxicants. Cinchona, in the form of the compound tincture, is of great value, cleaning the tongue, bracing the appetite, and allaying the desire. Vegetables should be increased in the dietary and meats lessened.

3. Aspirin.—Dockray reports the case of a woman aged fifty years, who took 100 grains of aspirin, the drug being given in 10 grain doses, every three hours, with marked toxic effects. All the sensory nerves were affected, causing numbness and anæsthesia, followed by pain. The heart was not affected at all, but the drug had a marked diuretic action lasting some days. There was also an acute inflammation of the right middle ear, due entirely to the drug.

5. Addison's Disease.—Tibbles states that Addison's disease holds an important place among the various discolorations of the skin, on account of the constitutional changes which precede and accompany it, its frequently fatal termination, and its association with disease of the suprarenal bodies. The pigmentation of the skin in Addison's disease can only be regarded as a cutaneous manifestation of a deeply seated malady involving the mechanism which produces or governs the distribution of pigment in the body. Before any pigmentation is observed there is a gradually increasing debility, breathlessness on exertion, a rapid feeble pulse and weak heart sounds, and epigastric or hypochondriac pain. As the disease advances there are added to these giddiness and faintness, anorexia, nausea, and vomiting. The nutrition is maintained and emaciation is unusual. The temperature remains normal or subnormal. Many of these symptoms resemble those of various forms of auto-intoxication. As the suprarenals are depurative organs, it is probable that the increasing debility and other symptoms are due to poisoning by bodies (probably leucomanins) resulting from the destruction of red corpuscles and the staining of the skin to the circulation of the products of disintegration of hæmoglobin. In many cases of Addison's disease the tuberculous or malignant disease of the suprarenal bodies is accompanied by de-

generative changes in the semilunar ganglia and branches of the solar plexus; such a disturbance of the great splanchnic nervous system could not occur without corresponding subjective changes.

7. Pathogenic Ticks.—Newstead, in this paper, briefly summarizes the pathogenic ticks concerned in the distribution of disease in man, with special reference to the differential characters in the external anatomy of *Ornithodoros moubata*, with an account of its life history. Ticks (Ixodoidea) belong to the great class arachnoidæ—spiders, mites, etc.—and are closely related to the mites which produce acarasis in man and animals. This superfamily is divided into two subfamilies—the argasidæ and the ixodidæ. The former is composed of two genera: *argas* and *ornithodoros*, while the ixodidæ comprises nine genera. A fully engorged tick acquires considerable size, and after fecundation invariably falls from its host. Egg laying takes place shortly afterwards, and the animal subsequently dies. The eggs are usually concealed beneath some object. The young larvæ, on hatching, swarm up the herbage, or over the floor of the huts, seeking a convenient spot in which to conceal themselves preparatory to sallying forth in the dark to seek a new host. Some species of ticks spend the whole of their lives from the larva to the adult stage on one host. Others have two or three hosts; but the members of the genus *ornithodoros* and *argas* have an indefinite number of hosts, and may live for several years. The ticks concerned in the transmission of human diseases are three in number: *Ornithodoros moubata*, *Argas persicus*, and *Dermacentor reticulatus*.

LANCET.

December 30, 1905.

1. Some of the Clinical Aspects of Pneumonia.
By D. W. C. HOOD.
2. The Medical Treatment of Uterine Fibroids and its Limitations.
By T. WILSON.
3. A Case of Acute Hæmorrhagic Pancreatitis.
By H. V. MUNSTER.
4. A Consideration of the Cholera Yellow Fever, and Plague Regulations and Aliens Act, 1905, in their Relation to the Spread of these Diseases.
By D. FORBES.
5. Four Cases of Hysterectomy.
By S. KEITH.
6. A Case of Melæna Neonatorum: Recovery.
By E. F. HEAP.

1. Pneumonia.—Hood states that while pneumonia is usually classified as being either lobar or catarrhal, and while in ninety-nine cases out of one hundred the two forms are sharply separated, yet bacteriological research has almost conclusively proved that the pneumococcus may be the essential cause of both conditions. Under pneumonia should also be included another class of cases, less frequent than either of the two already mentioned, which may be termed "pneumonic fever"—a form of rapid and disastrous infection, not only of the pulmonary area, but of other parts of the body, such as the endocardium, pericardium, and joints. The primary anatomical position of the commencing pneumonia may profoundly influence the symptoms. Thus in pneumonia of the apex, especially in children, constitutional disturbances are apt to arise which are misleading, the symptoms being of a cerebral type—headache, intolerance of light, extreme delirium, and restlessness. Pneumonia of the base may closely simulate functional mischief of the liver or stomach. The initial symptom of an attack of pneumonia may be pain, often very severe, referred to some part of the abdomen. Such pain may be difficult to distinguish from the pain at the commencement of appendicitis. Excessive irritability of the stomach with a high temperature should always draw attention to the chest. The principal symptom to which the utmost care should be given is the rate of respiration.

In all chest cases this is much increased. But the physical signs denoting implication of the contents of the chest may take some hours, not infrequently some days, to develop sufficiently to warrant an exact diagnosis. The extraordinary variation in the toxic influence—degrees of virulence of an infecting organism—is seen at its best in influenza, the bacillus of which is an agent which profoundly modifies all conditions of pneumonia. It may produce pneumonia *per se*, or it may infect a pneumonia, lobar or catarrhal, which has been caused by the pneumococcus. The two organisms appear to work together in perfect harmony. In differentiating cases of pneumonia due to or modified by the influenza bacillus from a pure lobar pneumonia due to the pneumococcus, the writer attaches great importance to an irregular fluctuating temperature. In ordinary lobar pneumonia the one constant symptom is a high fairly level range of temperature sustained up to the moment of crisis. The mortality of lobar pneumonia is not high; when complicated with influenza, however, it may be very fatal. A certain amount of bronchitis is usually superadded to the original pneumonic process. The length of the illness preceding the crisis or sudden cessation of temperature, whether measured by hours or days, is directly referable or proportioned to the amount of the inflammatory lesion. Postpneumonic empyema is one of the commonest causes of absence of crisis. The cough attending these residual effusions is peculiar, and is a valuable auxiliary symptom towards the diagnosis of fluid. It is essentially paroxysmal, commencing after movement, and is not usually followed by expectoration. The fluid may be very small in amount, and yet on its being withdrawn, the cough will cease. Occasionally pneumonia may terminate by crisis and be followed by effusion, but without any subsequent rise of temperature; but the contrary is much more usual.

2. Uterine Fibroids.—Wilson discusses the medical treatment of uterine fibroids and sums up his views as follows: Uterine fibroids are extremely common, but only in small proportion give rise to symptoms; in thirty per cent. of those that do, the consequences are so serious as to demand operative treatment. Medical treatment may be direct or symptomatic. The direct or absorptive treatment does not promise much advantage. Symptomatic treatment is successful in many cases in tiding the patient over a crisis and in obviating the necessity for operation. Bleeding is most often successfully treated by rest, ergot, and the intrauterine application of iodine. Pain requires treatment adapted to its cause; alcohol or morphine should only be administered in temporary and exceptional circumstances. The general condition of the patient, and especially the state of general nutrition and the cardiac and renal functions, should be carefully watched. And, finally, operation should be recommended when bleeding gives rise to anæmia and does not yield to ordinary treatment; when pain is severe and obstinate; when pressure symptoms, especially retention of urine, occur; when the tumor is rapidly increasing in size.

LYON MEDICAL

December 27, 1905.

1. Cortical Blindness.
By COLLET AND GRUBER.
2. Experiments with Antityphoid Serum.
By A. RODET and LAGRIFFOUL.

1. Cortical Blindness.—Collet and Gruber report an interesting and complicated case in which the autopsy revealed many foci of softening in the brain. One in the left third frontal convolution accounted for the aphasia, others in the occipital lobes explained the blindness, and one at the foot of the left first frontal convolution explained the tendency of the patient to let his head fall to the right.

2. Experiments with Antityphoid Serum.—Rodet and Lagriffoul state that the results obtained experimentally with antityphoid serum indicate that it possesses a preventive power as well as an antagonistic action upon the infection.

PRESSE MEDICALE.

December 23, 1905.

1. Day Nurseries, By M. BUE.
2. The Nasopharynx and Pulmonary Tuberculosis, By H. BOURGEOIS.
3. Bromatology of the Leguminosæ, By ALFRED MARTINET.

1. Day Nurseries.—Bue points out the decrease of infant mortality since the establishment of les crèches industrielles, which seem to correspond best with our day nurseries, and describes their institution in different parts of France.

2. The Nasopharynx and Pulmonary Tuberculosis.—Bourgeois discusses the thesis of Ducos, and questions the correctness of the statement made by the latter that a pseudoatrophic coryza precedes pulmonary tuberculosis.

3. Bromatology of the Leguminosæ.—Martinet gives the constituents of various leguminosæ, peas, beans, etc., and the principles of culinary preparation by means of which they are rendered most suitable for food.

December 27, 1905.

1. Syphilis and Myopia, By Professor F. DE LAPERSONNE.
2. Transportation of the Wounded on the Field. Utilization of Bicycle Wheels for the Improvisation of Ambulances, By M. BONNETTE.
3. Lecithin and Milk. Organic Phosphorus and the Lecithin of Milk, By ALBERT FOURNIER.
4. A New Syndrome. Postscarlatinal Adenopathy, By R. ROMME.

1. Syphilis and Myopia.—De Lapersonne makes the usual distinction between simple stationary myopia and the progressive or malignant variety. The frequent complications of the latter, such as atrophic choroiditis with floating bodies, chorioretinitis about the papilla, hæmorrhages about the macula and detachment of the retina, he is inclined to ascribe to the influence of hereditary syphilis.

2. Transportation of the Wounded on the Field.—Bonnette has devised what seems to be an improvement on the ordinary wheeled litter by substituting bicycle wheels in the place of those usually employed.

3. Lecithin and Milk.—Fournier says that the decomposition of a portion of the lecithin in milk sterilized at a temperature of 105° or 110° C. explains to a certain degree the mechanism of the digestive troubles met with in certain infants fed exclusively with aliment thus prepared.

4. Postscarlatinal Adenopathy.—Romme calls attention to Bela Schick's discussion of the appearance of enlargement of the lymphatic glands, particularly of the submaxillary, during convalescence from scarlet fever and its association with nephritis, and calls this group of symptoms a new syndrome.

SEMAINE MEDICALE.

December 27, 1905.

1. Operative Treatment of Chronic Frontal Sinusitis, By Dr. J. GUISEZ.
2. Cyanide of Mercury in an Alkaline Solution as a Test for Bilirubine, By Dr. PIETRO TRAPANI.

1. Operative Treatment of Chronic Frontal Sinusitis.—Guisez describes the operations of Luc and of Killian and then his own procedure which seems to be a modification of Killian's.

2. Cyanide of Mercury as a Test for Bilirubine.—Trapani obtains a beautiful red color in urine containing bilirubine by the addition of equal parts of a five per cent. solution of cyanide of mercury and a ten per cent. solution of caustic potash.

RIFORMA MEDICA

December 16, 1905.

1. Two Cases of Stenosis of the Œsophagus. The Importance of Radioscopy in the Study of Stenosis of the Œsophagus (*Continued*), By S. BARBA.
2. The Leucocyte Formula in Acute Poisoning Due to Mushrooms, and the Influence of Atropine Upon the Action of Muscarine, By G. SPAGNIOLO and M. SIGNER.
3. The Curative Action of Radium Rays in Rabies, By G. TIZZONI and A. BONGIOVANNI.
4. Biliary Cirrhoses, and their Surgical Treatment. (*To be continued*), By O. CIGNOZZI.

2. Leucocytosis in Mushroom Poisoning; Influence of Atropine on Muscarine.—Spagnuolo and Signer found that such mushroom poisons as muscarine, neurine, and choline can modify the leucocyte formula of the blood. The injection of a few milligrammes of muscarine can produce a marked leucocytosis, and the use of repeated doses of muscarine or of the other alkaloids mentioned in such a way as to give rise to chronic poisoning, always produces a decrease in the number of white cells, showing that the body thus becomes accustomed to the poison, and does no longer resist these poisons as actively as before. The leucocytosis produced by muscarine and the other alkaloids persists for some time, in some instances as long as thirty days, then gradually becoming normal. Along with the leucocytosis a great increase in the number of polynuclear leucocytes is noted, later an increase of mononuclear cells and finally, an increase in the number of lymphocytes. In animals in which atropine was injected after muscarine had been given, there was a less marked leucocytosis. Atropine, like some other substances, such as pilocarpine, digitaline, carbolic acid, etc., has the property of diminishing the number of leucocytes in the blood. In muscarine poisoning, therefore, atropine produces an effect opposing the reaction of the organism, which is trying to defend itself against muscarine, and prevents the organism from getting rid of the poisonous effects of the mushroom poisons.

3. Radium Rays in Hydrophobia.—Tizzoni and Bongiovanni, in this fourth preliminary communication, state that radium attacks the virus of rabies directly and neutralizes it in some way, especially in the early stages of development of the virus. The poisonous substance, however, is not affected by radium in the more resistant virus, which is found especially towards the end of the disease, as well as during the period of intubation.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE

December 17, 1905.

1. Researches on the Action of Blood Serum of Tuberculous Patients and on That of the Specific Anti-Bacterial Serum Upon the Resistance of the Body Against Experimental Tuberculous Infection, By S. LIVERATO.
2. The Consumption of Sea Food and Typhoid Fever at Mestre, By G. APPIANI.
3. Influence of Calcium Salts Upon the Osmotic Pressure of the Blood, By G. SPADARO.
4. Anatomical and Clinical Forms of Biliary Cirrhosis and their Œtiology, By A. GERALDINI.
5. Silk, Catgut, and Michel's Hooks, By G. MONZARDO.
6. The Œtiology of a Case of Eczema, By V. GALLETTA.
7. The Clinical Features of a Case of Anthrax, Treated with Endovenous and Intramuscular Injections of Large Doses of Anthrax Serum, By S. RAGNI.

1. Action of Antituberculous Serum.—Liverato tested Maragliano's serum in a series of experiments on animals, and concluded that it possesses marked specific bactericidal properties. It prevents the development of experimental tuberculosis in living animals, as was demonstrated by autopsies in animals inoculated, and then treated with this serum. It also

arrests the development of the bacillus of tuberculosis in cultures, and produces agglutinines and antibodies, as materials of defense in the struggle against bacillus. The blood serum of tuberculous patients does not show any effect upon the development of experimental tuberculosis in animals, but, on the contrary, favors the development of tuberculous infection by adding to the toxic materials already introduced with the inoculation. The serum of tuberculous patients, however, was capable of arresting partially the development of the tubercle bacillus in cultures, thanks to the bactericidal effect of normal human blood serum. The author promises to publish researches in the same line on a larger scale.

4. Anatomical and Clinical Forms of Biliary Cirrhosis.—Geraldini recommends that two forms of biliary cirrhosis be added to the list already known: A form with a slight hypertrophy of the liver and with an enlarged spleen. 2. A form with a liver of normal size or a slightly diminished liver, with a normal spleen and with serious and constant lesions in the kidneys.

5. Silk, Catgut, and Michel's Hooks.—Monzardo compares the value of catgut, silk, and the clamps recommended by Michel. He is greatly in favor of silk for closing wounds, and thinks that silk should be used in preference to deer tendons, kangaroo tendons, and filaments from dog's tails, from the aorta of an ox, etc. The hooks of Michel present serious disadvantages, although they have been used by a number of surgeons who claimed extraordinary successes.

6. Gout as a Cause of Eczema.—Galletta reports a case of eczema in which the patient was affected with gout, and insists that the arthritic diathesis was the cause of the skin affection. The eczema of this patient appeared after an attack of gout, and the author regards this eczema as a direct symptom as a constitutional affection, or as the dermal equivalent of gout.

MEDTSINSKOYE OBOZRENIJE.

1905, LXII', 14.

1. Acute Infectious Foci in the Pelvic Cavity and their Treatment, By A. P. GOUBARIEFF.
2. Cæsarian Section for Relative Indications, By N. M. PROZOROVSKI.

1. Acute Infectious Foci in the Pelvis.—Goubarieff classifies these foci into three groups: Those caused by inflammation of the appendix; those produced as the result of inflammation of the uterine annexa; and those resulting from effusion of blood due to extra-uterine pregnancy. The treatment of infectious foci due to appendicitis is preferably an operation in the interval, although an immediate operation may be necessary in the presence of acute symptoms. Suppurative foci which collect in Douglas's pouch are best reached through the vagina by incising the vault with scissors, widely opening the blades of the instrument to allow the escape of pus, and providing for thorough drainage. Exploratory puncture may be practised with the aid of a trocar. Such an instrument is described by the author, which is connected with a syringe for the purpose of aspirating the contents of the cavity.

2. Relative Indications for Cæsarean Section.—Prozorovski reports two cases of Cæsarean section in which the indications for the operation were relative, i. e., the pelvis were only moderately contracted. The question as to the relative indications of Cæsarean section is by no means settled. Formerly, when Cæsarean section did not give very favorable results and when its performance was attendant with a great deal of risk for the mother, perforation of the fetal head and embryotomy were considered more advisable operations. This has greatly changed under present conditions, for modern asepsis has reduced the danger of infection and of hæmorrhage to almost nothing. In the author's opinion cases of moderate contraction of the pelvis when the foetus is alive but cannot be deliv-

ered through the natural passages with craniotomy, should no longer be considered under the heading of "relative indications" for Cæsarean section, but should be regarded as "positive indications" for this operation, in order to save the life of the child. This view is gradually coming into favor. In the first case reported the operation was performed about eight hours after the beginning of labor while the pains were still vigorous and the uterus not yet exhausted. In the second case, the operation was performed twenty-four hours after the beginning of labor when the uterus was fairly exhausted from useless pains. The result was a difference in the course of the case after the operation. In the first case the involution of the uterus was good, while in the second there was subinvolution, which grew more evident as the case progressed. On the fifth day there was an odor to the discharge and the patient had a slight fever, so that hot irrigations and ergot were ordered. The conclusion is that the sooner after the beginning of labor Cæsarean section is performed, the better will the uterus contract and the better will it return to normal afterward.

ANNALS OF SURGERY.

December, 1905

1. Operative Treatment of Tumors of the Bladder, By F. S. WATSON.
2. Sarcoma of the Bladder, By C. G. DARLING.
3. Rupture of the Male Urinary Bladder, By O. HORWITZ.
4. Intraperitoneal Rupture of the Urinary Bladder, By J. R. COOK.
5. The Röntgen Method in Lithiasis of the Urinary Tract, By C. BECK.
6. Destroying the Urogenital Diaphragm or Pelvic Floor as a Means of Relieving Prostatic Ischuria, A New Operation, By E. W. ANDREWS.
7. Prostatic and Periprostatic Abscess, By S. ALEXANDER.
8. The Law of Accelerating Risk in Cancer, By E. W. ANDREWS.
9. The Use of X Rays in Carcinoma, By W. A. PUSEY.
10. Brown Atrophy of the Heart as a Result of Cholecystitis and as a Complication of Cholecystectomy, By B. HOLMES.

1. Operative Treatment of Tumors of the Bladder.—Watson states as the result of the operative treatment to the present time that if the operative deaths and rapid recurrences are comprised under the head of operative failures, it would signify 28.6 per cent. of failures in benign tumors, exclusive of myxoma, and 46 per cent. in carcinoma. The large percentage of recurrences in benign as well as malignant tumors indicates more radical procedures. The author, therefore, advocates total extirpation of the bladder, and of the prostate also, if necessary, in all cases of carcinoma that have not extended beyond these structures, and in which there are no metastases. The same treatment is recommended for benign growths in which recurrence has taken place after a primary operation. Ureteral implantation should be abandoned and lumbar nephrostomy, with ligation of the uterus should be performed prior to the operation for removal of the tumor.

5. The Roentgen Method in Lithiasis of the Urinary Tract.—Beck affirms that this method will determine whether calculi are present in the kidneys, ureters, or bladder, and also their size, shape, and number. The chemical composition of calculi may be inferred from the depth of the shadows which they cast. For diagnostic purposes this method is of more value than cystoscopy. In cases in which vesical calculus is suspected one should not omit to skiagraph the renal as well as the vesical region, since most of the vesical calculi originate in the kidneys.

6. Relief of Prostatic Ischuria.—Andrews arrives at the following conclusions: 1. The male pelvic outlet is a narrow bony ligamentous triangle, often too small

for the overgrown or senile prostate. 2. The triangular ligament and inogenital diaphragm hold the bladder neck and prostate immovably between these bones. 3. On cutting away these bands the constricted overgrown mass falls back into a wider space and ceases to be obstructed. 4. Incidentally there is relief to rectal reflexes and spasm. 5. The retroprostatic pouch is abolished and the *bas fond* becomes a true funnel with its outlet at the lowest point. 6. The technique recommended by the author is a simple one. It is especially efficient in respect to the deep hæmostasis which it advocates.

7. **Prostatic and Periprostatic Abscess.**—Alexander has observed that prostatic abscess usually begins by an extension of infection from the urethra into the gland ducts of the prostate. Periprostatic suppuration can usually be prevented by an early operation. Operations which have thus far been recommended for the relief of prostatic abscess consist in: 1. Incision and drainage through the anterior wall of the rectum. 2. Mechanical opening of the abscess by means of a sound passed into the urethra. 3. Incision through the capsule and sheath after exposing the posterior surface of the prostate by a curved perineal incision. 4. Drainage through a median perineal section.

8. **Law of Accelerating Risk in Cancer.**—Andrews has arranged a graphic method for testing a large number of cases by their past history, and a lesser number by way of prophecy. By this method he is able to exclude with reasonable accuracy cases which should not be operated upon. When the risk curve, in this method, rises to 90 or 100 per cent., it is useless to perform any but palliative operations. By applying the author's method at the middle stage of any case one will be almost in the position of one who has seen its entire course. The author feels certain that the first stages of any growth will furnish the data for all the later stages, whether they are very slow or very rapid. Though each case has its own rate of progression that rate, once determined, will accelerate uniformly, according to the law of squares.

9. **The Use of X Rays in Carcinoma.**—Pusey believes that operation is preferable to treatment with x rays in operable carcinoma, with the exception of epithelioma. In the latter, if the contiguous glands are not involved, the results are as radical as in treatment by operation, and the treatment is unattended with pain and not followed by unsatisfactory scars. The x ray treatment does not increase the danger of metastasis, nor does it stimulate to more rapid growth an inoperable carcinoma. It must not be forgotten that metastases are sometimes present, though overlooked, when the treatment is begun. The inoperable cases are often most unexpectedly benefited.

ARCHIVES OF PÆDIATRICS.

December, 1905.

1. Congenital Laryngeal Stridor. A Contribution to the Pathology of the Affection, with Report of an Autopsy on a Case, By H. KOPLIK.
2. Notes of a Case of Acute Leucæmia, By A. D. BLACKADER and B. D. GILLIES.
3. A Case of Aleukemic Leucæmia in a Boy Two and a Half Years Old, By A. HAND, JR.
4. Fat Indigestion from a Mother's Milk, By W. P. NORTHRUP.
5. Temperature, Pulse, and Respiration Relationships in Infancy and Childhood, By M. SOLIS-COHEN.

1. **Congenital Laryngeal Stridor.**—Koplik concludes that laryngeal stridor may occur in conjunction with an enlarged thymus, but if there coexist such marked distortion anatomically of the epiglottis and larynx as in the cases of Lees, Refslund, and his own, the thymus condition need not be considered. The theory of Thomson and Turner needs more confirmation in view

of the fact that in four recorded autopsies the anatomical anomalies fully account for the symptoms. Until an autopsy reveals a perfectly normal larynx and epiglottis in a child in whom laryngeal stridor coexisted during life with a large thymus, the thymus theory or the nervous meoordination theory cannot properly be entertained.

2. **A Case of Acute Leucæmia.**—Blackader and Gillies conclude that acute leucæmia in childhood differs in few respects from the same disease in adult life. Three types of the case may be considered. In the first there is profound anæmia with general glandular enlargement, with hæmorrhages in the later stages of the disease. In the second the hæmorrhagic diathesis is manifested from the outset, petechiæ appearing early, and the case may assume the aspects of an infective purpura. In the third lesions of the buccal cavity are the most striking features.

3. **Fat Indigestion from a Mother's Milk.**—Northrup notes the following points in his case: 1. The mother was unfortunate from the conflicting purposes of too many physicians. The accidents would have been prevented had one physician exercised sole responsibility. 2. Excess of fat produced ileocolitis with diarrhoea, with frothy, brownish to olive green discharges containing mucus in tenacious masses, colic, sleeplessness, and loss of weight. 3. Excess of fat was produced by forced feeding, including a quart of milk daily, lack of exercise, indoor living, and two attacks of tonsillitis. 4. Fat was lowered by diet and driving in the open air. 5. The infant became susceptible to the presence in her food of the least trace of milk, and could not digest it. 6. The first attack of tonsillitis disturbed the baby's digestion. The second with its consequent anæmia entirely upset it.

5. **Temperature, Pulse, and Respiration Relationships in Infancy and Childhood.**—Solis-Cohen concluded from his investigations that in children under five years of age the pulse respiration ratio is less, the higher the temperature, but that in children more than five years of age the ratio is influenced very little or not at all by the temperature. In general, it may be said that the pulse respiration ratio is as four to one, in children of all ages and at all temperatures, except in infants with any degree of fever and in children from two to nine years with hyperpyrexia in whom the ratio becomes as three to one, or three and five tenths to one.

THE JOURNAL OF NERVOUS AND MENTAL DISEASE.

January, 1906.

1. A Study of Two Unusual Brain Tumors, By HERMAN C. GORDINIER and H. W. CAREY.
2. On the Association of Epilepsy with Muscular Conditions, Fitting Best in the Cadre of the Myopathies, By ONUF (ONUFFROWITZ.)
3. Case of Multiform Tic, Including Automatic Speech and Purposive Movement, By MORTON PRINCE.
1. **A Study of Two Unusual Brain Tumors.**—Gordinier and Carey report two cases of unusual brain tumors, one being a multiple cylindroma of the base of the brain, involving the second, third, fourth, and eighth cranial nerves, and producing symptoms closely simulating a tumor of the quadrigeminal bodies; the other being a neuroepithelioma of the choroid plexus of the fourth ventricle, growing dorsally and producing symptoms characteristic of a tumor of the median lobe and of the cerebellum.

2. **On the Association of Epilepsy with Muscular Conditions Fitting Best Into the Cadre of the Myopathies.**—Onuf reports the history of a group of epileptics presenting muscular atrophies, partly defective muscular action without clearly demonstrable atrophy, with definite distribution of these disturbances, manifested on the whole as follows: 1. Wing like standing off of the scapulæ, due apparently chiefly to weak-

ness of the trapezius, possibly also serratus magnus, rhomboideus, and lavator anguli scapulæ muscles. 2. Atrophy of the scapular muscles in a strict sense. 3. Lordosis of the lumbar spine in erect position, disappearing in sitting position, due to weakness of the extensors of the hip and causing an inclination of the pelvis forward and compensatory bending backward of the body. 4. Pes valgus. 5. Involvement of the facial muscles. 6. Electrical changes manifested most frequently by a reversal of the galvanic formula, particularly in the deltoid muscles. 7. Fibrillary twitchings. Certainly these symptoms were not present in all cases alike and in the same degree.

3. Case of Multiform Tic, Including Automatic Speech and Purpose Movements.—Prince describes a case of multiform tic, presenting several tics, such as choreiform movements of the eyelids, face, and arms, and complex purpose movements of different kinds. Many of these automatic physiological movements are remarkable in themselves, but most unusual is the automatic speech interjected in the midst of nearly every sentence uttered, and certain purpose movements in handling a knife. The exciting causes of these motor automatisms were various, such as external suggestion, autosuggestions, apprehension, and fear to exhibit a certain tic.

EDINBURGH MEDICAL JOURNAL.

January, 1906.

1. The Erection of Municipal Dispensaries, and a Complete Organization Against Tuberculosis,
By R. W. PHILIP.
2. The Duty of the Municipality in the Prevention of Tuberculosis,
By J. ROBERTSON.
3. Two Cases of Poisoning with Arsenious Acid in which the Yellow Sulphide of Arsenic was Found in the Alimentary Canal,
By H. LITTLEJOHN and A. W. DRINKWATER.
4. The Pathology of Paroxysmal Hæmoglobinuria,
By J. EASON.
5. Notes of Four Cases Treated by Doyen's Serum,
By A. THOMSON.
6. Note on a Case of Osteogenesis Imperfecta,
By J. S. FOWLER.

1. The Erection of Municipal Dispensaries.—Philip thinks the question as to the need of municipal establishments for the treatment of tuberculosis is already decided. The system which he recommends should be organized as follows: 1. A dispensary, or several dispensaries, as the centre of all the agencies. 2. Sanatoria for selected patients to arrest the disease. 3. A hospital or asylum for advanced cases, and to limit dissemination. 4. A colony for the subsequent life and employment of those who have been treated, and in whom the disease has been arrested. The following is recommended as a plan for a dispensary: 1. Reception and examination of patients, and accurate clinical history of each case. 2. Bacteriological examination of sputa and other discharges. 3. Instruction of patients in personal hygiene, and the prevention of the spreading of infection. 4. Dispensing of medicines, disinfectants, sputum holders, and food if necessary. 5. Visitations at the patients' homes by a physician and a nurse to determine the character of the dwelling, and the possibilities of extending the disease. 6. Selection of early cases for sanatoria and late cases for homes for incurables, also supervision of those who have been discharged from sanatoria. 7. Guidance of consumptives and their friends in all matters relating to pulmonary tuberculosis.

2. The Duty of the Municipality in the Prevention of Tuberculosis.—Robertson urges the following reasons for the compulsory report concerning cases of tuberculosis: 1. The medical attendant concerns himself with the medical treatment rather than with the spread of the disease. With routine notification skilled persons can be employed to see that proper precautions

are taken to prevent the spread of the disease. 2. With routine and systematic notification statistics will gradually accumulate which will establish the ætiology of the disease. 3. With routine notification disinfection and cleansing can be systematically carried out. 4. The fact will become generally known that proper care will prevent the spread of the disease.

4. The Pathology of Paroxysmal Hæmoglobinuria.—Eason reached the following conclusions: 1. A pathological substance is in the serum and lymph of those who have paroxysmal hæmoglobinuria. 2. This substance will dissolve (in vitro) the corpuscles of the patient, and also those of normal individuals under certain conditions of temperature. 3. A temperature below that of the body will favor the action of the hæmolytic substance, while the normal body temperature will retard or prevent it. 4. The author's observations concerning phagocytic activity correspond with those of other investigators in their comparative work on immunity. 5. Excessive phagocytic action is believed to be significant of the antecedent union of the intermediary body with the red corpuscles. 6. The intermediary body of paroxysmal hæmoglobinuria requires the presence of a thermolabile substance complement to produce solution of red corpuscles. 7. The changes in the red cells in the course of solution are similar to those produced during hæmolysis by an immune serum. 8. The serum of normal individuals does not cause hæmolysis.

5. Notes of Four Cases Treated by Doyen's Serum.—Thomson records this additional testimony on an important subject. In all four cases operation of an extensive character had been performed. Only in the fourth was it found that the disease was not malignant. In this case a series of injections was made and the growth was removed, the patient subsequently recovering and remaining well. In the other three cases the serum was injected before operation, after it, or before and after. Recurrence and a rapidly fatal issue resulted in all three cases; in other words, the serum had no apparent effect whatever upon the progress of the disease.

AMERICAN JOURNAL OF SURGERY.

January, 1906.

1. The Technics of Urethral Dilatations,
By F. C. VALENTINE and T. M. TOWNSEND.
2. The Diagnosis and Differentiation of Cervical Tumors and Enlargements,
By M. A. AUSTIN.
3. Plaster of Paris and How to Use It,
By M. W. WARE.
4. The Relation of Malposition of the Uterus to Endometritis,
By B. MÜLLER.
5. Some Reflections Upon Inguinal Hernia,
By C. A. BUTLER.
6. Insanity a Symptom of Old Fractures of the Skull.
Operation. Recovery. A Medico-legal Case,
By J. E. CHAMBERS.

2. The Diagnosis and Differentiation of Cervical Tumors and Enlargements.—Austin urges the importance of differentiation in these tumors, whether benign or malignant. The origin or connection of a tumor should first be ascertained, its relation to glands, to the inferior maxilla, and the skin, and especially to vessels, nerves, and muscles forming the triangles of the neck. One should next consider the presence or absence of fever, the location of other tumors, the color of the skin, the indication as to anæmia or cachexia, the presence of an eruption, the family history, and the relation of the individual to syphilis or tuberculosis. Examination of the tumor will speak as to its period of existence and rapidity of growth. The patient should also be interrogated with respect to pain, tenderness, pulsation, crepitus, fluctuation, and the relations of the tumor to contiguous tissues. Microscopical or radiographic examination may be necessary to complete the differentiation.

4. The Relation of Malposition of the Uterus to

Endometritis. Muller dwells upon the importance of uterine malpositions in their relation to uterine inflammation. The two chief malpositions are the anterior and the posterior, with their various degrees and intensities. Retroflexions are of more importance than retroversions in connection with endometritis, since they are more prone to cause venous and lymphatic stasis with consequent hyperæmia and hypertrophy. If this condition persists several years before the malposition is remedied, the latter procedure will no longer suffice to remedy the inflammation. Retroflexion may be congenital or may date from puberty, and in such cases there may be no pathological symptoms. In general practice half of those who consult the physician for disease of the genital organs have endometritis, and in two thirds of such cases there is also retroflexion.

ZENTRALBLATT FUER GYNAEKOLOGIE.

December 30, 1905.

1. Poisonous and Fatal Action of Camphor, By K. HAPPICH.
2. A Puerperal Binder, By H. B. SEMMELINK.

1. Toxic Action of Camphor.—Happich has experimented with camphor, and concludes that it is a dangerous drug to use in patients with insufficient metabolism of carbohydrates, in cachectic and diabetic persons, or in individuals suffering from chloral hydrate poisoning. It is also dangerous in cases of carbonic oxide poisoning, of severe cardiac disease, of advanced bilateral pneumonia, of eclampsia, of severe sepsis. It is contraindicated in cases of eclampsia and psychical excitement because its main action is upon the central nervous system.

Proceedings of Societies.

SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

Eighteenth Annual Meeting, held in Louisville, December 12, 13, and 14, 1905.

The President, Dr. LEWIS C. BOSHER, of Richmond, in the chair.

(Continued from page 62.)

An Operation for Large Proctoceles.—Dr. GEORGE H. NOBLE, of Atlanta, presented the technique of an operation which was intended only for large proctoceles. Small ones were relieved by the ordinary perineal operations. In large proctocoele not infrequently there were more or less tediousness, loss of blood in the denudation and certain objections to puckering the overstretched and distended tissues together and forcing them into the rectum. Furthermore, there were unsatisfactory results by infecting the strong and resisting rectovaginal septum. This operation was presented for the purpose of overcoming those objections. In the technique it would be observed that the proctocoele was actually resected, and that the strong or normal rectovaginal septum above the weak occluding point was drawn down to the level of the levator ani muscle and securely anchored. The points were: 1. A thorough dilatation of the anus and recleansing of the rectum. 2. Denudation of a wide collar, as it were, the ring around the neck of the proctocoele, beginning high up in the vagina and extending near to the promontory of the proctocoele. It was unnecessary to remove the mucosa over the last point mentioned, as it was cut away in the resection. By proceeding with the denudation from within outward, the veins of the rectovaginal septum were cut through at a high point and secured with compression forceps, and the necessity of repeatedly cutting the same vessels in repairing the wound was avoided. 3. Two fingers were placed upon

the promontory of the proctocoele, carried into the vagina and out through the anus, forcing the proctocoele ahead of them, and in this way completely everting it through the anus. It was seized with a forceps at the point where it protruded and was gradually drawn down until the lax portions were secured and a feeling of tenseness was felt. If in drawing the anterior rectal wall down the normal parts of the rectum did not come as low as the levator ani, the rectum should be liberated by dissecting it from the vagina, which would permit of further descent and allow all the overstretched tissues to project beyond the anus. 4. A light compression forceps was then placed upon the neck of the proctocoele just external to the anus, for the purpose of holding it in position. 5. Two sutures, preferably of medium sized kangaroo tendon, were passed through the unruptured portion of the perinæum close to the sphincter ani muscle after the manner of Emmet with his tension sutures in perinæorrhaphy. These two sutures in passing across from side to side should take up the prolapsed portion of the anterior wall of the rectum. When tied, they closely approximated and anchored sound or healthy rectum to the levator ani muscle and rectal vessels in the deep pelvic fascia. 6. The vaginal side of the wound was completed by doing perinæorrhaphy. The protruding proctocoele was amputated about three quarters of an inch to an inch external to the clamp, and its edges were closely sutured with a continuous suture of catgut. The case was treated then as an ordinary perinæorrhaphy, except that a wet, soft dressing was placed over the protruding stump. The stump retracted within the anus in a week's time, and took care of itself. The author reported five cases in which he had done this operation with very satisfactory results.

Starvation and Locked Bowels for from Ten Days to Two Weeks.—Dr. HOWARD A. KELLY, of Baltimore, asked for a more extended trial of a method of after treatment, which he has used in some fifteen cases, for the most part incomplete tears of the rectovaginal septum. The treatment consisted of two parts—first, a very limited diet for from ten to fifteen days; and, second, the locking up of the bowels during this period.

The Surgical Treatment of Cancer of the Head and Neck.—Dr. GEORGE W. CRILE, of Cleveland, in a paper on this subject, presented general conclusions to the effect that since the head and neck presented an exposed field, cancer here, unlike that of the stomach, the intestines, or even the breast, might be recognized at its very beginning; that every case was at some time curable by complete excision; that the field of regional metastasis was exceptionally accessible; that cancer rarely penetrated beyond the extraordinary lymphatic collar of the neck; that the growth tended to remain here localized; and that by freely utilizing all the modern resources of surgery, and by applying the same comprehensive block dissection as in the radical operation for breast cancer, the final outcome in the surgical treatment of cancer of the head and neck should be not only as good as that of almost any other portion of the body, but even better.

Wandering, or Aberrant, Retroperitoneal Fibroid Tumors of Uterine Origin.—Dr. I. S. STONE, of Washington, stated that these tumors must reach the space behind the peritoneum by way of the broad ligament. This route was the only one open and was necessarily followed by every fibroid which escaped into any part of the retroperitoneal space, however remote. After a fibroid became well separated from the uterus, it usually remained in the broad ligament indefinitely, and would always do so unless other tumors developed in the uterus and were forced to follow directly in the same channel as the one preceding. It would be observed that single tumors were generally found in the broad ligament, and the development of others must occur

before we could have the variety we were studying. Many subperitoneal tumors were seen, and a few indeed had been noticed where the tumor had lost all connection with the uterus. Such growths could not become parasitic and receive their nutrition from some other source, as did the intraperitoneal wandering or parasitic variety. He had no experience with a single wandering tumor behind the peritonæum which had entirely lost its uterine connections, and believed such development an impossibility for the reason mentioned above, that a *vis a tergo* must exist. The movement of these tumors was therefore directly opposite to that of the intraperitoneal variety, for either the latter must have movable organs to assist in their progress or else traction, a result of adhesive contact, must aid in the lifting of them upward in the abdominal cavity.

Goitre, with a Report of 182 Operations Upon the Thyreoid.—Dr. CHARLES H. MAYO, of Rochester, Minn., said that the surgery of the thyreoid was increasing. Operations were as satisfactory as any others, giving relief with brief disability. In fifty years the mortality had fallen from forty per cent. to less than three, Kocher's being two. Accessory glands, like branchial cysts, were more often found in the lines of hypoblastic inversion. The lymphatics served as ducts. Total extirpation was followed by cachexia in from fifty to seventy per cent. of cases. Graves's disease was probably due to an oversecretion or perverted secretion, the gland showing a general or local condition of heightened cell activity.

The great majority of enlargements in young people responded to medication. Part of the benefit obtained in the removal of the sympathetic was from cutting the lymph channels, thus draining the thyreoid. During the past seventeen years the Mayos had operated upon 182 thyreoids, with nine deaths.

The Diagnosis of Renal Calculus.—Dr. GUY LEROY HUNNER, of Baltimore, took up the subject from the general relationships, first considering the various other maladies of the kidney from which nephrolithiasis must be distinguished, and then discussing the diseases of other organs which might mislead the diagnostician. The Röntgen ray and the wax tipped bougie were considered invaluable aids in the diagnosis of renal calculus, but they both failed at times, and the importance of the urinary examination in all cases was emphasized.

Requirements and Qualifications for a Successful Career in Surgery.—The PRESIDENT selected this subject for his address, and said, among other things, that to the recent graduate in medicine no department of his profession appealed with the same force as surgery. While a student he had been impressed by the brilliancy of the results secured by his professors before his very eyes; at the meetings of the alumni the clinics in surgery were crowded, while those in other branches were usually either slimly attended or else attended as a compliment to the individual holding them, rather than from actual interest in the subject. In most medical colleges the prominence of the professors of surgery in all faculty affairs was well known; while, considering the more material side of the question, he had little trouble in ascertaining that it was no unusual thing for a surgeon to secure for a single operation, occupying but an hour or two, or even less, a fee greater than the entire collections of the general practitioner for a week's steady work, with broken rest and with cares and responsibilities innumerable. On leaving college, if the young graduate entered into hospital service, these facts were impressed on him with even greater force, and later on, having himself entered the ranks of struggling practitioners, the same lessons were borne in upon him with increasing emphasis. Little wonder was it, then, that so many young medical men, bearing all these things in mind, decided that they, too, would enter this alluring field, where they believed they would

effect such marvelous results in brilliant cures, in abundant pecuniary reward, in the homage of their fellow men, and, if moved by even higher motives, in the actual good they might do to suffering humanity.

Dr. Boshier called attention to the importance of an academic education. Many a man had attained success in surgery without this advantage, but we were dealing with the rule, not the exception. This academic education should be truly liberal, in both quantity and quality, and should include as much as possible of studies of a scientific nature, especially biology, physics, and chemistry. Of these three branches, physics would prove of the greatest use to the surgeon, while biology and chemistry were branches of more practical value to the general practitioner.

It was incumbent upon teachers and practitioners of surgery to make it plain to the public that there was a material difference between the trained surgeon and the novice. This education would enable the public to discriminate in a wholesome manner and would ultimately have the effect of rendering it apparent to the candidate for surgical practice that he must properly equip himself if he would stand before the world as a representative of the great surgical art.

Traumatism of the Ureter and Pelvis of the Kidney.

—Dr. RUFUS B. HALL, of Cincinnati, read a paper on this subject, in which he reported two cases, and said that the ultimate results were so satisfactory that he hoped they might be of sufficient interest to warrant their recital in detail. The exact location of the injury was not determined in either case. The first patient was a girl, nine years of age; the second a lad, seventeen years of age. In reviewing the history of the first case he was inclined to believe that there was a free rent either in the pelvis of the kidney or in the ureter.

In the second there was a narrow opening either in the ureter or the pelvis of the kidney, from which urine leaked very slowly at first. In this case rupture had taken place evidently on September 10th. It was more than ten days later before urine was extravasated to make a palpable tumor, so that it could be outlined. On November 1st the tumor appeared to be not larger than the boy's head. Both patients were relieved by an operation with drainage.

Aneurysm Treated by Suture Inside the Sac.—Dr.

F. W. PARHAM, of New Orleans, read a paper in which he reported two cases treated after the method of Matas. One was an idiopathic aneurysm of the popliteal artery; the other an aneurysm of the second and third portions of the left subclavian. The popliteal aneurysm was treated by suture, inside the sac, of proximal and distal openings separately, and continuous suture of the groove of the artery intervening. In the subclavian case only the proximal opening was sutured, the distal bleeding being controlled by ligatures. Both patients recovered.

The indications for this procedure were: 1. The practicability of laying open and inspecting the interior of the sac. 2. The possibility of applying a constrictor, clamp, or temporary ligature to the proximal side of the tumor. In the second case reported, the suture was employed because the proximal ligature failed to stop the bleeding completely.

The operation of suture within the sac was to be preferred to ligature, because, first, every possible bit of artery was saved except that actually forming the sac of the aneurysm. Second, suture accomplished simple approximation of the intima, and did not cut through, as might happen with ligature of an atheromatous artery. Third, all collateral bleeding in the sac was stopped by direct suture of these vessel mouths within the sac, and packing of the sac became unnecessary. Fourth, there was consequently no disruption of the outside vascular (collateral) connections of the

sac wall, already much relieved by the emptying of the sac.

The reconstruction of the artery was to be attempted only in certain cases, as in aortic aneurysm, where suture of the proximal opening would, like ligation, probably be fatal, and in other aneurysms where from swelling and lymphangitis, as in Morris's case, the danger of gangrene was too great to warrant any interference with the nutrient stream. In such case reconstruction of the artery might be preferred for two reasons: 1. Because even a temporary continuance of the main stream would be a great advantage until the subsidence of œdema consequent upon the evacuation of the sac had somewhat relieved the stress upon the collateral vessels. 2. Because, as remarked by Matas and shown in Dana's case, it was feasible at a secondary operation to open the sac again and close the arterial opening. In abdominal aneurysms the method of Matas offered some hope of cure.

Varicosity of the Saphenous Veins with Resulting Varicose Ulcer.—Dr. ROBERT CAROTHERS, of Cincinnati, mentioned the operations most commonly employed for the relief of this condition, and among them reference was made to the Schede operation and the Trendelenburg, but, he said, complete excision of the internal saphenous vein was undoubtedly the most satisfactory operation to be employed, though until the ingenious invention by Charles H. Mayo of two instruments which subcutaneously stripped the vein, it was an operation requiring a long incision, tedious dissection, and considerable time for its performance. This operation, as advised by Dr. Mayo, was that, after making a small incision in the upper third of the thigh over the saphenous vein, the vein was located, tied in two places, cut between the ligatures, and the distal end threaded into the enucleator, which was pushed under the skin along the course of the vein for about six to eight inches, where another small opening was made on to the instrument, the vein taken out, then the instrument drawn out from the first opening, rethreading the vein into the instrument, and again pushing it under the skin for another six or eight inches, another small incision on to the instrument allowing the vein to be drawn out, which was again ligated and removed. The lateral branches were torn off, and, as a rule, closed themselves. This operation was very quickly and easily performed, but was not without danger from hæmorrhage or sepsis. He had twice done this operation, and the immediate results were satisfactory. His cases were too new to say what would be the ultimate result. They were old cases with large, troublesome ulcers treated by skin grafting. The patients were able to leave the hospital in less than three weeks, wearing an elastic porous bandage for support, and were now at the end of about eight weeks both at work as housewives. In one case in which there was a troublesome eczema, after an effort for one week to relieve that, he again followed the advice of Dr. Mayo, sealing the eczematous area with compound tincture of benzoin until the skin wound had healed.

The Dangers in Scopolamine-Morphine Anæsthesia.—Dr. HORACE J. WHITACRE, of Cincinnati, read a paper with this title, in which he based his conclusions upon observations made in forty cases of anæsthesia induced by this method, upon animal experimentation, and upon a review of all deaths that had been reported up to the present time: "1. Scopolamine-morphine narcosis is not devoid of danger. 2. The use of scopolamine and morphine alone for surgical narcosis is not justifiable and in my experience is not practicable. 3. A single dose two hours before operation lessens the discomforts attendant upon the operative procedure to a high degree, and may obtain a definite place in surgical practice. 4. Four deaths have occurred in a series of 2,400 collected cases which have been so definitely related to

the use of this method of narcosis that they are probably scopolamine deaths; this, however, in the absence of autopsy demonstration. 5. These deaths have been reported as occurring with a type picture of alkaloid poisoning, and heart failure has been given as the direct cause of death. 6. Fatty degeneration of the liver and kidney has been produced by repeated doses of scopolamine alone, and of the scopolamine-morphine combination, in animals. 7. This method of producing or assisting narcosis cannot yet be recommended for use in general practice, in spite of the great advantage it seems to offer."

Scopolamine-Morphine-Ethyl Chloride-Ether Anæsthesia.—Dr. H. A. ROYSTER, of Raleigh, N. C., said that of all the combinations suggested, that which formed the subject of his paper commended itself to him, because he believed, first, that ether was our safest general anæsthetic; second, that ethyl chloride secured the pleasantest primary narcosis; third, that the preliminary use of scopolamine with morphine increased the patient's mental resisting power and lessened the quantity of ether required. In his opinion there could be no question of the superiority of ethyl chloride over nitrous oxide gas as a preliminary to ether anæsthesia. Its action was more certain and constant and equally agreeable, and he could not help feeling that it was safer. His experience in regard to the combination of morphine and scopolamine was confined solely to the use of these drugs prior to the administration of ether. Of those who had investigated scopolamine, some stated that it was dangerous and uncertain in its action. Its most marked effects were in quieting the nervous fear, the promotion of an easy courage in beginning the anæsthetic, and a prolongation of the restful sleep afterward. Clinical tests had led him to conclude that scopolamine was not identical with hyoscine, that it did something more than morphine alone, and that it was safe in proper doses. Nevertheless, he sounded a note of warning in regard to the use of scopolamine, inasmuch as several deaths had followed its employment.

Overlapping the Aponeuroses in the Closure of Wounds of the Abdominal Wall.—Dr. CHARLES P. NOBLE, of Philadelphia, recommended a method of overlapping the aponeuroses which he had used with the utmost satisfaction for nine years in the closure of all wounds of the abdominal wall, including the Alexander operation, inguinal and umbilical herniæ, diastasis of the recti muscles, appendectomy, and nephrorrhaphy. In but a single case did he know of a postoperative hernia where the abdominal wound had been closed by this method. When drainage was employed through the abdominal wound, the method was not applicable. The technique of the operation was illustrated by several drawings which demonstrated the method clearly. He closed his article by describing the methods of overlapping the fasciæ employed by Lucas-Championnière and E. Wyllys Andrews in the operation for inguinal hernia.

The Early Diagnosis and Radical Cure of Carcinoma of the Prostate.—Dr. HUGH H. YOUNG, of Baltimore, presented these conclusions, which were drawn from this study of forty cases: Carcinoma of the prostate was more frequent than was usually supposed—occurring in about ten per cent. of the cases of prostatic enlargement, as shown also by Albarran. It might begin as an isolated nodule in an otherwise benign hypertrophy, or a prostatic enlargement which had for many years furnished the symptoms and signs of benign hypertrophy might suddenly become malignant. Marked induration, if only an intralobular nodule in one or both lobes of the prostate in men past fifty years of age, should be viewed with suspicion, especially if the cystoscope showed little intravesicular prostatic outgrowth, and pain and tenderness were present. The posterior

surface of the prostate should be exposed as for an ordinary prostatectomy, and if the operator was unable to make a positive diagnosis of malignancy, longitudinal incisions should be made on each side of the urethra, as in prostatectomy, and a piece of tissue excised for frozen sections, which could be prepared in about six minutes and examined by the operator at once. If the disease was malignant, the incisions might be cauterized and closed and the radical operation performed. Cancer of the prostate remained for a long time within the confines of the lobes, the urethra, bladder, and especially the posterior capsule of the prostate resting inviolate for a considerable period. Extraprostatic invasion nearly always occurred, first, along the ejaculatory ducts into the space immediately above the prostate between the seminal vesicles and the bladder, and beneath the fascia of Denonvilliers. Thence the disease gradually invaded the inferior surface of the trigonum and the lymphatics leading toward the lateral walls of the pelvis, but involvement of the pelvic glands occurred late, and often the disease showed metastases into the osseous system without first invading the glands. A cure could be expected only by radical measures, and the routine removal of the seminal vesicles, vasa deferentia, and most of the vesical trigonum with the entire prostate.

The Surgical Treatment of Floating Kidney; Post-operative Results.—Dr. FLOYD W. McRAE, of Atlanta, argued for surgical intervention rather than attempted support by bandages or corsets, but urged careful selection of cases for operation and the recognition and correction of associated pathological conditions. Special attention was called to the frequent coincidence of floating kidney and chronic or recurring appendicitis.

The author described a new muscle splitting operation, delivery of the kidney, partial decapsulation, and the making of a broad quadrilateral suspensory ligament by dissecting forward the fibrous capsule from near the hilum to beyond the convex border of the kidney. A mattress suture was put in each angle of the capsule, near the hilum, from which the suspensory ligament had been dissected, and including the reflected flap from either pole of the kidney. These sutures were passed deep into muscles of the back, high up, so as to bring the kidney well into the hollow of the loin and close up to the twelfth rib. The quadrilateral suspensory ligament was next brought up between the separated muscles and held there by two silkworm gut sutures passed through all the structures from within out. A cigarette drain was placed between these sutures and the remainder of the wound closed in layers with interrupted catgut sutures. Care was taken to avoid injury to the iliohypogastric and ilioinguinal nerves.

Chronic Endotracheitis; A New Method of Treatment with New Instruments.—Dr. DANIEL H. CRAIG, of Boston, read a paper thus entitled (see page 21).

Fracture-Dislocation of the Condyles of the Femur with Backward Luxation of the Leg.—Dr. GEORGE S. BROWN, of Birmingham, Ala., reported a case in which he did an open operation seven months after the receipt of the injury. He resorted to subperiosteal resection of the fragments with reduction in wiring, which resulted in the cure of a bad deformity, and the limb of the patient was now normal, except for half an inch of shortening.

The patient, aged fourteen, was injured in a football game at a small college, and was treated for three months for sprained knee. A skiagraph revealed fracture-dislocation of the condyles. He walked for four months after this with bad valgus and flexion of the leg on the thigh before submitting to an operation. The limb and knee joint were restored to normal. There was bony union of the fragments in their dislocated position. Through a four inch incision down

the inner aspect of the femur, the lower end of which stopped short of the level of the knee joint, the periosteum was cut through and pushed downward, the union chiseled through, the broken surfaces resected, and the leg brought forward on the thigh without opening the joint. The fragments were wired and the internal lateral ligament closed with kangaroo tendon. The skin was closed with a subcuticular suture of silkworm gut. Owing to the first dressing being left too long, there was a superficial infection, which did not interfere with the final good result.

The Technique of Operations for Appendicitis.—Dr. W. P. CARR, of Washington, D. C., said that no disease presented more varieties and more grades of severity than appendicitis. There were all shades between a mild catarrhal attack and a severe gangrenous case with diffuse peritonitis. It was apparent that no one method of operating would suit all cases. Surgeons must modify the technique to suit the case and the strength of the patient. In his first one hundred cases he had eight deaths. In his last seventy-two cases he had had but two deaths, and he believed the improvement in mortality was due to a fuller knowledge of the condition of the patients and a suitable adjustment of the technique to those conditions.

For practical purposes he divided all cases of appendicitis into four classes: 1. Unruptured, uncomplicated. 2. Unruptured, complicated by other serious disease, such as nephritis, tuberculosis, or myocarditis. 3. Perforated or ruptured—first thirty-six hours; patient in good general condition. 4. Perforated or ruptured—after thirty-six hours; complicated by diffuse peritonitis or by asthenia from long illness or by other serious disease; patient in bad general condition.

As to the incision, it should always be either the gridiron or through the rectus muscle; otherwise hernia was very apt to follow. There was but one objection to the gridiron incision, namely, it could not be greatly enlarged without cutting across the fibres of the internal oblique and transversalis muscles. This, he thought, should never be done. It was better to close the wound and open the abdomen again through the rectus muscle if a very large opening became necessary. However, if this incision was well placed, it might be stretched with the fingers and a fairly large opening made through which any uncomplicated operation might be done. The stretching should never be excessive, as paralysis of the stretched muscle fibres might result, and hernia follow.

Neglected Appendicitis.—Dr. CHARLES M. ROSSER, of Dallas, Texas, conceded the safety of an acutely inflamed appendix while the pathology was limited to the structures of that viscus; but the serious mortality following cases not surgically treated justified a classification of those passing the initial stage as being neglected, whether the delay was due to indifference, ignorance, or cowardice, and whether the responsibility was upon the family, patient or medical adviser. The safe time limit would vary with the character of the attack of inflammation, the skill of the operator, and the resistance of the individual. The author considered the question of whether to operate settled affirmatively; that of when to operate was agreed to, if early; but he proposed the question of who should operate, and what operation should be done. While appendectomies were occasionally simple in performance, yet they were prospectively delicate, and the patient was entitled to the most skilful service available in each instance, and he thought the geographical distribution of competent surgeons was so general that there was hardly an excuse for an emergency operation by the attending physician if he was not well equipped. He advised incision in all cases at all stages except in patients already moribund.

Late Results in the Treatment of "Inoperable" Sarcoma with the Mixed Toxines of Erysipelas and

Bacillus Prodigiosus.—Dr. W. B. COLEY, of New York, gave a brief history of the development of the method, stating that he had used the mixed toxins since 1892. Up to the present time he had advocated the treatment practically only in cases of "inoperable" sarcoma, but in view of the experience thus far gained from his own cases as well as the successful cases in the hands of other surgeons, he believed it wise to use the injections in all cases after a primary operation for sarcoma as a prophylactic against recurrence. In these cases, however, the dose should be much smaller, just sufficient to produce a very slight reaction, and the treatment should be continued for two or three months. He also believed it wise, in practically all cases of sarcoma of the extremities, to give the patient the benefit of a trial with the mixed toxins before sacrificing the limb by amputation. This opinion was based upon twelve cases of sarcoma of the extremities in which the treatment had been so tried, with the result that the tumor disappeared and in eight of the twelve cases the patients were alive and well from three to six years afterward; two were well at the time of the last observation, at the end of one year; the two other cases were recent. Three of these twelve were personal cases. Eight of them were of the round celled variety; two spindle celled; in two no microscopical examination was made, although amputation had been advised by prominent surgeons; five were sarcoma of the tibia, one of the fibula, two of the femur, one of the forearm, one of the humerus, one of the thigh, involving the periosteum, and one of the calf of the leg. In all of these cases amputation had been seriously considered, but it seemed justifiable to give the toxins a trial.

As to the final results of personal cases, of thirty-four which might be fairly classed as successful, in that the tumor disappeared under treatment with the mixed toxins, the type of the neoplasm was as follows: twelve round celled, sixteen spindle celled, two mixed celled, one epithelioma, and three of undoubted diagnosis, though not confirmed microscopically. The results in these patients thus far had been as follows: Four were well less than a year; three were well from one to two years; three were well from two to three years; three were well from three to five years; twenty-three were well from five to thirteen years. In five cases a recurrence took place and finally proved fatal. In one of these recurrent cases the patient had remained well for eight years; in one, three years and a quarter; in two, two years and a half; in one, seven months; in one, six months. These five cases of recurrence, the author argued, were important in that they furnished absolute proof of the correctness of the diagnosis and refuted the statements formerly often made in regard to the successful cases, namely, that there must have been an error in the diagnosis. The writer stated that he had been able to collect fifty-six cases of complete or partial success obtained by other men.

Laminectomy.—Dr. R. E. FORT followed with a paper in which he reported a case in which he had successfully operated.

The following papers were read by title: End Results in Appendicitis Work, by Dr. Edward E. Balloch, of Washington, D. C.; Two Cases of Vaginal Cesarean Section for Eclampsia, by Dr. John F. Moran, of Washington, D. C.; Cesarean Section Necessitated by Obstruction of Pelvis by Right Half of Bicornuate Uterus, by Dr. George S. Brown, of Birmingham, Ala.; Penetrating Wounds of the Abdomen, with Report of Cases; Including a Case of Traumatic Rupture of Congenital Cystic Kidney, by Dr. C. E. Caldwell, of Cincinnati; The Vicious Circle After Gastroenterostomy, by Dr. John B. Deaver, of Philadelphia; Some of the Uses of Pelvic Massage, by Dr. Joseph Taber Johnson, of Washington, D. C.; Recent Progress in the Surgery of

the Vascular System, by Dr. Rudolph Matas, of New Orleans.

Officers for the ensuing year were elected as follows: President, Dr. George H. Noble, of Atlanta; vice-presidents, Dr. Stuart McGuire, of Richmond, and Dr. E. Denegre Martin, of New Orleans; secretary, Dr. W. D. Haggard, of Nashville; treasurer, Dr. Charles M. Rosser, of Dallas, Texas. Baltimore was selected as the place for holding the next annual meeting.

Book Notices.

Human Physiology. By JOSEPH H. RAYMOND, A. M., M. D., Professor of Physiology and Hygiene, Long Island College Hospital. Third Edition, Thoroughly Revised. Philadelphia and London: W. B. Saunders & Co.

The science of physiology has advanced so rapidly within the past few years that in order to keep up with it the student has been compelled to keep a sharp eye on the periodical literature. The need of new textbooks and the careful revision of older ones has urgently impressed itself on the mind of the teacher of physiology. The ripe experience of Professor Raymond and the success of his well known book have prompted the preparation of the third edition of this work. As an interesting and modern exposition of the science of physiology, we may place this book in the hands of students and expect that the latter will receive at once a practical and precise acquaintance with the many facts of the broad subject of physiology. The most recent investigations are referred to, including Chittenden's work on *Nutrition, Hemolysis and Bacteriolysis and Ovarian and Abdominal Pregnancy*. The work is in every way a complete textbook.

Indigestion. The Diagnosis and Treatment of the Functional Derangements of the Stomach. By GEORGE HERSCHELL, M. D., Senior Physician to the Queen's Jubilee Hospital. Third Edition. Chicago: W. T. Keener & Co.

The term "indigestion" as employed here seems to include everything that may be the matter with the stomach, except carcinoma and ulcer. Why these latter causes of indigestion should be omitted, and why the bowel should not be considered, we do not understand. The preliminary chapters on normal digestion, the nature of indigestion, and symptoms and their mode of production, are very suggestive. The rest of the book shows the broad mindedness of the general practitioner, with indications at the same time that the author has given special thought to digestive derangements. Treatment is gone into at greater length than usual, the useful suggestions including the management of the patient from beginning to end of the disease, and thorough consideration of the diet and how this or that should be cooked, as well as the medicinal measures. Of electricity the author says: "This is in my opinion the most potent agent which we possess for the purpose of quieting the gastric glands, provided that we make use of the intragastric application of the high tension induction coil current, or the tri-phase sinusoidal current." He graphically describes the early stage of gastric myasthenia, where the stomach normally just empties itself in about six hours, but is in a condition of unstable equilibrium, ready to be upset by any overwork or worry, and rendered unable to empty itself at all. So an attack of "indigestion" is the result. In aspirating through the stomach tube with suction, he warns against pushing the tube up and down without first letting in the air. We consider this book a useful addition to our digestive library, particularly as regards the careful classification of symptoms, and the outlines of treatment.

Miscellany.

Surgical Anatomy of Small Intestine.—The desirability of being able to locate with reasonable accuracy the first kink of intestine which may appear in a laparotomy wound is self evident. George H. Monks (*Annals of Surgery*, October, 1905) has continued his most interesting series of researches along these lines and concludes as follows: First, that the relative shape of the mesentery and intestine *in situ* can be best understood by arranging the intestine in a series of alternating curves upon a wire, thus putting all parts of the intestine and mesentery gently on the stretch. Second, that the mesentery may be roughly divided into two portions: (1) a proximal or flat portion, which comprises about two thirds or three quarters of the mesentery; and (2) a distal or ruffled portion, the "ruffled border" which comprises the remaining one third or one fourth. Third, that the main sheets of the mesentery alternate from above downward, going first to the left, then to the right, and finally proceeding to the iliac regions and pelvis. Fourth, that the fold of mesentery which descends into the pelvis can usually be palpated from a wound in the lower abdomen, and that it forms a valuable guide for the finger in the attempt to reach the left abdominal fossa. (I would make the suggestion that this fold be known as "the pelvis fold of the mesentery.") Fifth, that the part of the ileum which is about to enter the cæcum can usually be picked up from a right iliac wound by the forefinger, which, after passing into the pelvis, is curved upward and around "the pelvic fold of the mesentery." Sixth, that while the intestine freed from its mesentery is straight, or nearly so, the mesentery when attached to it obliges it to follow a curved tortuous course. Seventh, that when the gut is attached to the mesentery the free border of the gut is several feet longer than its mesenteric border, and that the free border many therefore properly be called "the long side," and the mesenteric border, "the short side," of the intestine. Eighth, that the influence of the mesentery is such that the intestine is thrown into a series of alternating loops of varying shapes, sizes, and planes. Ninth, that kinks in the intestine are usually confined to the lateral aspect of the gut. Tenth, that a distended and paralyzed intestine filled with gas or semiliquid contents does not at once empty itself through an enterostomy wound. That the cause of this is obstruction not only from sharp curves and kinks, but also from outside pressure on the tube, and still further because the fluid portions are in the dependent loops, where they act as traps to obstruct the passage of gases along the tube. Eleventh, that unless the intestine to "gathered up" on the tube, it is impossible to pass any instrument, hard or soft, straight or curved, into the gut without the probability of soon engaging the wall of the intestine, usually in its free border. And, finally, that when the size of the wound and its situation will permit, the surest method, at least on the cadaver, of determining which is the proximal and which the distal end of a loop of intestine is by palpation of the mesenteric root between the thumb and fingers of one hand.

Tools in the Use of Surgery.—The following remarks are to be found in the *American Journal of Surgery*: A scroll saw, with an assortment of a dozen saws, can be purchased at the hardware store for twenty-five cents; it is ideal for resection of the small bones of the hand and foot, for amputations of the digits, etc. Well tempered carpenter's chisels and gouges, and a carpenter's wooden mallet answer the purpose admirably for bone work. A useful bone drill can also be selected from the stock of the hardware dealer. A gardener's

pruning knife and a carpenter's mitre saw are the best tools for the removal of plaster dressings. A cheap potato knife, rough sharpened on a stone, is excellent for cutting through starch bandages. Crochet needles are most useful for lifting buried stitches out of a sinus. Knitting needles find another purpose as a means of rupturing the membranes when this is needed in obstetrical work. Sharp and blunt retractors may be fashioned, in an emergency, by bending the tines of a fork and the handle of a spoon, respectively. A tea-spoon is also useful as an elevator of the eye, when resection of the superior maxilla is performed. An inverted tea strainer is useful in the dressing after colostomy, to prevent pressure of the gauze upon the gut. A spoon shaped potato cutter may be used, in an emergency, as a wound curette. Similarly, applicators, probes, and depressors may be improvised by twisting stout copper wire. The multiple surgical uses of the hair pin are also well known. Of stouter material, if necessary, a small self retaining speculum can be quickly made from steel wire; it often obviates the need of an assistant when searching the hand or foot for a foreign body. A wedge of hard wood makes a gag quite useful, often, when administering anaesthesia. A discarded thermometer case (or a hard rubber douche point) is a serviceable handle in which to mount, with candle grease or adhesive plaster, a stick of silver nitrate. Steel spring tape measures are better than the wires generally sold for the purpose, for conducting to an x ray tube the current from the coil or static machine; easily kept taut, and quickly adjusted, they are safest for the patient and most convenient for the operator; that they are not insulated is inconsequential—the coverings on the regular wires do not insulate the induced current. Cheap powder blowers, such as are used for insecticides, may be employed as insufflators in surgical work, and pepper boxes are useful for dusting powders. Wooden skewers are serviceable nail cleaners. Rolling pins and kitchen towel racks are very convenient for adhesive plaster, rubber tissue, etc., especially for hospital dressings. Grocers' bags are the most serviceable receptacles for soiled dressings. Tar paper is a smooth, fairly waterproof material to tack on the floor when preparing a room for operation.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ended January 12, 1906:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
Dist. of Columbia—Washington	Dec. 31-Jan. 6	4	4
Florida—Jacksonville	Dec. 31-Jan. 6	6	6
Florida—Mayo	Dec. 31-Jan. 6	3	3
Florida—Newberry	Dec. 31-Jan. 6	2	2
Louisiana—New Orleans	Dec. 31-Jan. 6	2	2
Maryland—Baltimore	Dec. 31-Jan. 6	6	6
Missouri—St. Louis	Dec. 24-Jan. 6	2	2
Virginia—Norfolk	Jan. 3	45	45
5 in city and 40 on Craney Island.			
Wisconsin—Appleton	Dec. 31-Jan. 6	3	3

Smallpox—Foreign.

Brazil—Bahia	Nov. 25-Dec. 9	39	1
Brazil—Rio de Janeiro	Nov. 20-Dec. 3	15	11
Ecuador—Guayaquil	Dec. 3-10	6	2
France—Paris	Dec. 16-23	10	1
India—Calcutta	Nov. 25-Dec. 3	6	6
India—Karachi	Dec. 3-10	1	1
India—Madras	Dec. 2-8	3	3
Italy—Messina	Dec. 9-16	1	1
Mexico—City of Mexico	Dec. 8-16	4	2
Mexico—Tuxpam	Dec. 26-Jan. 2	2	2
Russia—Odessa	Nov. 11-18	19	1
Turkey—Constantinople	Dec. 3-10	3	3

Yellow Fever.

Brazil—Rio de Janeiro.....	Nov. 20-Dec. 3....	4	2
Brazil—San Paulo.....	Nov. 5-12.....	1	1
Colombia—Barranquilla.....	Nov. 27-Dec. 4....	6	4
Colombia—Cartagena.....	Dec. 16-23.....	1	1
Cuba—Havana.....	Jan. 1-4.....	1	1
Ecuador—Guayaquil.....	Dec. 3-10.....	1	4
Mexico—Merida.....	Dec. 24-30.....	2	
Mexico—Vera Cruz.....	Dec. 24-30.....	1	1

Cholera.

India—Bombay.....	Dec. 5-12.....	1	
India—Calcutta.....	Nov. 25-Dec. 2....	102	

Plague.

Brazil—Rio de Janeiro.....	Nov. 20-Dec. 3....	43	18
India—General.....	Nov. 1-11.....	3,611	2,760
India—Bombay.....	Dec. 5-12.....	15	15
India—Calcutta.....	Nov. 25-Dec. 2....	20	20
India—Karachi.....	Dec. 3-10.....	5	5
Russia—Government of Astrakhan.....	Nov. 19-Dec. 3....	680	651

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending January 10, 1906:

BEAN, L. C., Acting Assistant Surgeon. Granted leave of absence for two days from January 8, 1906.

CARRINGTON, P. M., Surgeon. Directed to proceed to El Paso, Tex., for special temporary duty.

EARLE, B. H., Passed Assistant Surgeon. Granted leave of absence for four months from February 4, 1906.

EBERSOLE, R. E., Assistant Surgeon. Relieved from duty at Tampa Bay Quarantine, and directed to proceed to San Francisco, Cal., and report to the Medical Officer in Command for duty and assignment to quarters.

GOLDBERGER, JOS., Passed Assistant Surgeon. Relieved from special temporary duty at New Orleans, and directed to rejoin his station in Washington.

GUTHRIE, M. C., Assistant Surgeon. Relieved from duty at Cape Fear Quarantine Station, and directed to proceed to New York and report to Surgeon Stoner, Ellis Island, N. Y., for duty.

McKEON, F. H., Assistant Surgeon. Relieved from duty at New Orleans, La., and directed to proceed to San Francisco Quarantine Station, reporting to the Medical Officer in Command for duty and assignment to quarters.

NYDEGGER, J. A., Passed Assistant Surgeon. Granted leave of absence for one day, January 2, 1906.

SPRAGUE, E. K., Passed Assistant Surgeon. Relieved from duty at Ellis Island, N. Y., and directed to proceed to Cape Fear Quarantine Station and assume command of the Service.

SPRATT, R. D., Assistant Surgeon. Relieved from duty at Louisville, Ky., and from temporary duty at Gulf Quarantine Station, Miss., and directed to proceed to Mobile, Ala., assuming temporary charge of the Service at that port.

WASDIN, EUGENE, Surgeon. Leave of absence granted Surgeon Wasdin for one month from December 15, 1905, amended so as to be effective from December 17, 1905.

Boards Convened.

Board convened to meet at Boston, Mass., for the physical examination of an Inspector in the Immigration Service. Detail for the board—Surgeon R. M. WOODWARD, Chairman; Acting Assistant Surgeon F. H. CLEAVES, Recorder.

Board convened to meet in Philadelphia, Pa., January 9, 1906, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Surgeon F. IRWIN, Chairman; Assistant Surgeon H. McG. ROBERTSON, Recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 13, 1906:

ALLEN, JOHN H., First Lieutenant and Assistant Surgeon. Granted twenty days' leave of absence.

BARNEY, CHARLES N., First Lieutenant and Assistant Surgeon. Reports for treatment at General Hospital, Fort Bayard, New Mexico.

HUNTINGTON, P. H., First Lieutenant and Assistant Surgeon. Ordered, upon arrival at San Francisco, Cal., to proceed at once to Fort Rosencrans, Cal., for duty.

KILBOURNE, E. D., First Lieutenant and Assistant Surgeon. Left Army General Hospital, Presidio of San Francisco, Cal., on thirty days' leave of absence.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending January 13, 1906:

ANGWIN, W. A., Assistant Surgeon. Detached from the *Massachusetts* when placed out of commission, and ordered to the *Indiana*.

BLACKBURN, T. A., Acting Assistant Surgeon. Detached from the *Franklin*, ordered home, and granted leave of absence until the expiration of appointment as acting assistant surgeon, January 23, 1906.

CURTIS, E. E., Acting Assistant Surgeon. Ordered to the *Franklin*.

LEACH, P., Surgeon. Detached from the *Massachusetts*, when placed out of commission, and ordered to the *Indiana*.

McMURDO, P. F., Acting Assistant Surgeon. Detached from the *Franklin*, ordered home, and granted leave of absence until expiration of appointment as acting assistant surgeon, January 23, 1906.

MILLER, J. T., Acting Assistant Surgeon. Ordered to the *Franklin*.

SCHETKY, L. O., Pharmacist. Ordered to the Naval Hospital, Norfolk, Va.

Births, Marriages and Deaths.**Married.**

BURTON—BERRY.—In Sandy Creek, N. Y., on Monday, January 1st, Dr. Samuel Lawson Burton, of Kingston, Canada, and Mrs. Kittie Thompson Berry.

McCARTY—FAGAN.—In Berthoud, Colorado, on Wednesday, January 3d, Dr. D. W. McCarty and Miss Jennie Fagan.

MULRENAN—BYRNE.—In Philadelphia, on Wednesday, January 10th, Dr. John P. Mulrenan and Miss Mary Carroll Byrne.

POST—TANNER.—In Jacksonville, Illinois, on Thursday, January 4th, Dr. Martin Hayward Post and Miss Mary Tanner.

WOLVERTON—MORONEY.—In Philadelphia, on Monday, January 1st, Dr. Frederic H. Wolverson and Miss Anastasia Moroney.

Died.

BELLINGER.—In Durango, Colorado, on Friday, January 5th, Dr. P. F. Bellinger, aged fifty years.

BENDEKE.—In Minneapolis, Minnesota, on Friday, January 5th, Dr. Carl O. Bendeke, aged sixty-four years.

COOK.—In New York, on Sunday, January 7th, Dr. Harriet N. F. Cook, aged seventy-five years.

DAVIS.—In Lansford, Pennsylvania, on Friday, January 5th, Dr. David R. Davis.

McDOWELL.—In Longmont, Colorado, on Wednesday, January 3d, Dr. U. D. McDowell, aged forty years.

MULHERIN.—In Syracuse, N. Y., on Friday, January 5th, Dr. John F. Mulherin, aged thirty-seven years.

POTTER.—In Germantown, Philadelphia, on Sunday, January 7th, Dr. Thomas Clifford Potter, aged fifty-nine years.

SMITH.—In Springfield, Massachusetts, on Thursday, January 4th, Dr. Edwin D. Smith, aged seventy-four years.

TYLER.—In Warren, Massachusetts, on Saturday, January 6th, Dr. Abbie Cutler Tyler, of Washington, D. C.

WENTZ.—In New Providence, Pennsylvania, on Wednesday, January 3d, Dr. Charles E. Wentz, aged twenty-eight years.

New York Medical Journal

INCORPORATING THE

Philadelphia Medical Journal and The Medical News

A Weekly Review of Medicine

VOL. LXXXIII, No. 4

NEW YORK, JANUARY 27, 1906.

WHOLE No. 1417.

Original Communications.

ETIOLOGY, DIAGNOSIS, AND TREATMENT OF PERINEPHRITIC ABSCESS:

WITH COMMENTS ON CASES.*

By RAMON GUITERAS, M. D.,

NEW YORK.

Perinephritic abscess is a collection of pus about the kidney and usually situated between that organ and the posterior abdominal wall. It was recognized and treated radically at a very early period in the history of medicine. Hippocrates wrote (460-470 B. C.): "As soon as a swelling has appeared in the region of the kidney, one should incise it down to the kidneys"—*κατὰ τὸν νεφρον* (De Affectionibus internis, 14, 15, 17; Littre's Edition, Vol. VII, pp. 203-204.)

The classification of perinephritic abscesses into primary and secondary cases was first made by Rayer in 1841. He called those cases primary which originated in the perinephritic tissues *per se*; those secondary which were due to the extension of infection from the kidney or other neighboring organs or tissues.

Causes.—The cause of *primary perinephritic abscess* is rarely discoverable. Such cases have been attributed by various observers to traumatism, blows, exertion, lifting, straining, and congestion from heat or cold. Personally I do not believe that any one of these causes is sufficient to produce a perinephritic abscess, or that primary cases exist, except those due to direct infection through a wound of the perinephritic tissues.

Secondary perinephritic abscess may result from the extension of infection from the kidney, or from other neighboring organs or tissues. The diseases of the kidney that may cause perinephritic abscess are pyelitis, pyelonephritis, and pyonephrosis. These may be due to calculus, tuberculosis, ascending infection, descending or hæmatogenous infection, or infected wounds of the kidney. In such cases the perinephritic abscess results from the rupture of a suppurative area in the kidney into the perinephritic tissues; or perhaps, as is sometimes stated, from extension by contiguity through the unruptured kidney.

Cases of secondary perinephritic abscess not due to disease or injury of the kidney result from

the extension of a suppurative process from other organs or tissues, either in the abdominopelvic or the thoracic cavity. When secondary to disease of an organ in the abdominopelvic cavity, if the organ at the site of the suppuration is not covered by peritonæum, the pus can extend or burrow beneath the peritonæum until it reaches the perirenal tissues. If the organ at the site of the suppuration is covered by peritonæum, the apposing surfaces of visceral and parietal peritonæum must first adhere before the suppurative process can pierce the two layers and reach the perirenal fossa.

Among the conditions in the abdominopelvic cavity which may give rise to perinephritic abscess, the following may be mentioned: Abscess of the liver; suppurative cholecystitis; abscess of the spleen or pancreas; typhoid fever; appendicitis; ulcerative colitis; operations on or diseases of the rectum; impaction of feces with ulceration; prostatic abscess; diseases or injuries of or operations on the urethra, the spermatic cord, or the testis; diseases or injuries of or operations on the uterus and annexa.

The conditions in the thoracic cavity which may give rise to perinephritic abscess are, abscess of the lungs and empyema. In these cases the suppurative process breaks through the pleura and the diaphragm into the perirenal space.

Statistics.—These are the causes to which perinephritic abscess have been ascribed, but a careful study of the various tables of cases that have been compiled shows that in a large proportion of cases the cause has been unknown. It may be well to give here the statistics of Küster (*Die Chirurgie der Nieren, der Harnleiter und der Nebennieren*, Stuttgart, 1896-1902), which are more complete and recent than any other tables on the subject. In 230 cases which he collected from the literature, the causes were as follows:

Contusions, lacerations, and other traumatisms....	67
Suppuration in the kidney.....	59
Puerperal sepsis.....	7
Typhoid ulcer or perforation.....	6
Appendicitis.....	3
Liver and gallbladder abscess.....	3
Pleurisy and pneumonia.....	2
Perforation of the colon.....	2
Inflammations or operations on the lower genitourinary tract, the rectum and the peritonæum; psoas abscess, constipation, suppuration in distant parts, and unknown causes.....	81
Total.....	230

* An address delivered before the Chicago Medical Association, November 29, 1905.

It will be seen that in 59 cases, or one fourth the total number, the kidney was the source of the abscess. Of these 59 cases, 31 were due to calculus, while in the remaining 28 cases the cause of the suppuration in the kidney was not known.

Albarran (*Maladies des reins, in Traité de chirurgie*, viii) says that in half the cases the ætiology of perinephritic abscess is not known, and cannot be determined, and that in the other half the underlying cause is some kidney lesion. This is a somewhat larger proportion than would appear from a study of Küster's tables (59 out of 230 were due to kidney lesions). From reading the statistics in textbooks one would form the opinion that one third of the reported or operated cases are due to unknown causes, one third to renal suppurative lesions, and the remaining one third to affections of other organs.

From personal experience, however, I believe that nearly all of the cases are due to renal disease, and that those due to disease of other organs are rare and not, properly speaking, perinephritic abscesses. Formerly, in observing cases of perinephritic abscess, I did not concern myself deeply with the origin of the pus. I was usually satisfied in opening and evacuating the abscess, draining the cavity, and paying very little attention to the case afterwards, allowing the patient to leave the hospital with the loin healed, or with a fistulous opening remaining.

In the fifteen cases briefly described in the following, however, I have kept a more careful history:

CASE I.—Housewife, age 36; with pyelonephrosis, kidney ruptured on the way to the hospital, causing perinephritic abscess; the abscess was opened and the kidney incised; later nephrectomy; died slowly from sepsis. The pyelonephritis was due to calculus.

CASE II.—Laborer, age 27; perinephritic abscess, which was opened; examination of the cavity showed pointed calculus, sticking out of the renal substance; it was extracted, followed by an exploratory nephrotomy; the pus from the abscess had gravitated down to the iliac fossa and the thigh, necessitating counter-openings in both localities; the wound healed uneventfully.

CASE III.—Laborer, age 40; with a periphritic abscess which was opened and evacuated; exploration of the abscess cavity revealed a calculus free in the post-renal space; there was an opening into the kidney; nephrotomy was performed, but no other calculus found; the kidney tissue was nearly destroyed; an attempt at nephrectomy was made, but was not carried out on account of dense anterior adhesions. The posterior half was removed under partial nephrectomy; there was scarcely any hæmorrhage. The wound healed slowly.

CASE IV.—Peddler, age 36; rupture of the kidney due to renal calculus, followed by hæmorrhage and suppuration, perinephritic abscess; the abscess was incised; the wound healed slowly; a fæcal fistula developed for five weeks after the operation, due to injury while dressing the wound; the recovery was slow, otherwise uneventful.

CASE V.—Carpenter, age 38; perinephritic abscess and empyema; tuberculous changes in lungs; the urine showed probable tuberculous kidney; the abscess in the lower end was opened, and the kidney incised and drained. An excision of a piece of rib was made necessary on account of the empyema; both wounds re-

mained opened and the patient died slowly of sepsis, tuberculosis, or both. No autopsy.

CASE VI.—Upholsterer, age 50; perinephritic abscess and tuberculous changes in lungs. The patient refused operation, and under stimulant and suppurative treatment he began to improve, when he left the hospital after a prolonged stay the mass was absorbed; he had a low temperature during this time.

CASE VII.—Housewife, age 28; perinephritic abscess, complicating renal tuberculosis. The abscess was incised and evacuated; with exploratory nephrotomy; a fistula remained; nephrectomy was performed. Death resulted from shock.

CASE VIII.—Musician, age 26; perinephritic abscess in right side; no pus in the urine; the abscess was incised and evacuated; an opening into the kidney tissue was found, just admitting the finger tip; the remainder of the kidney was apparently healthy; later he developed a tuberculous knee and was operated upon; the recovery was uneventful.

CASE IX.—Laborer, age 35; entered the hospital with a large perinephritic abscess, which was opened and the finger, inserted into the wound, went straight into the pelvis of the kidney; this opening was enlarged by blunt dissection and the scissors, and the pelvis and calices thoroughly explored, but nothing found. Exploratory nephrotomy.

CASE X.—Laborer, age 40. Similar case with exploratory nephrotomy.

CASE XI.—Laborer, age 33, with perinephritic abscess; after incising and evacuating it, an opening into the kidney was found; the wound was drained for forty-eight hours, and then an exploratory nephrotomy was made, showing a large pyonephrotic kidney.

CASE XII.—Laborer, age 35, with an ascending pyelonephritis; an abscess in the kidney ruptured, giving rise to a perinephritic abscess. After opening this a suppurating sinus remained, attended by frequent febrile attacks. Nephrectomy was performed. Death from uræmia.

CASE XIII.—Laborer, age 20, was injured while blasting, sustaining a rupture of the kidney, afterwards developing into a perinephritic abscess; nephrectomy was performed with recovery.

CASE XIV.—Waiter, age 30, empyema and perinephritic abscess; both were opened and drained; no exploration was made; the perinephritic abscess probably resulted from empyema.

CASE XV.—Laborer, age 30; perinephritic abscess of large size was present. As patient's condition was critical, he was operated on by force; the abscess was opened under local anæsthesia; kidney could not be felt, although on account of the patient's condition, a very careful examination could not be made. The patient was suffering from a calculus nephritis and pyelonephritis at the time.

Of the fifteen cases here outlined a suppurative condition existed in 14 cases. The causes of the renal suppuration were:

Calculi	4	Rupture of kidney.....	1
Tuberculosis	4	Empyema	1
Pyonephrosis.....	3	—	—
Ascending pyelonephritis	2		15

Operations consisted of eight nephrotomies, four nephrectomies, and one partial nephrectomy.

Perinephritic abscess may occur at any age, cases having been recorded in patients from five weeks old upward. Küster found that most of the cases occurred between the ages of 20 and 45, and that it was twice as frequent in men as in women. The reason of this disproportion probably lies in the frequency of traumatism in

men. The disease is slightly more common on the right side than on the left. Of 197 cases, 2 were bilateral.

Diagnosis.—The diagnosis of perinephritic abscess *per se* does not usually present serious difficulties. The discovery of the source of the abscess, however, is another matter, and is often not only difficult, but impossible. But as the primary treatment of the abscess is the same, whencesoever the source, this is not of so much importance before opening it as it may seem.

The onset of perinephritic abscess is the same as that of any other deep seated suppuration. In acute cases there are at first chills, sweating and fever, usually of a remittent type. In chronic cases perhaps nothing but a fever of low grade

to 180 degrees. In walking he shows more or less stiffness, and inclines the body to the affected side. In sitting he rests upon the opposite tuber ischii, so as to give rest to and relax the psoas muscle on the affected side. Some cases, however, fail to show any of these signs.

The *local symptoms* begin with a feeling of fullness, or a dull, deep seated pain in the space under the twelfth rib, which becomes worse on deep inspiration. The pain may be paroxysmal in character, and may be referred in various directions, often shooting down into the thigh, hypogastrium, scrotum, penis, testes, and groin, owing to the wide distribution of the lumbar plexus in the regions named. The pain may even be referred to the knee. Pain in any other region



FIG. 1.—Showing the obliteration of the concavity under the ribs in a case of perinephritic abscess on the right side; front view.

will be noticed, until tumefaction appears in the loin.

The gastrointestinal tract is usually affected in both acute and chronic cases, as shown by the anorexia, coated tongue, flatulence, perhaps vomiting, diarrhoea, or constipation. Headaches and other signs of uræmia, together with rapid emaciation, show that renal involvement is present, and must be watched for.

The pulse in perinephritic abscess is often rapid at first, full and hard, while later it will be found to be small, rapid, and weak as the sepsis increases. The skin is usually hot and dry, or covered with profuse perspiration.

The position of the patient is often quite characteristic. When he lies on his back his thigh on that side will not extend beyond the angle of 160



FIG. 2.—Perinephritic abscess of the left side, showing a slight bulge of the tissue under the ribs replacing the lumbar hollow.

than the loin in such cases may mean, besides a referred pain, that the abscess has burrowed away from the loin, behind the peritonæum, to various distant parts; or that the region in which the pain is most marked is the source of the abscess.

On *examination* we have tenderness on pressure in the loin, as well as on the abdomen. In some cases there will be a tumor or swelling in the loin, with perhaps redness and tension of the skin. The lumbar tumor often does not appear, however, until weeks after the onset of the suppuration. The first thing noted on inspection is that on one side the lumbar hollow is replaced by a slight bulge of the tissues under the ribs, as in Fig. 2. This difference is chiefly noted when the patient is sitting or standing, and may be overlooked when he is recumbent. Gradually the iliocostal curve is obliterated, as in Figs. 3 and 4. On palpation without or, if need be, with anæsthesia, a diffuse, indistinctly outlined mass

is felt in the loin, which does not feel like the kidney, and cannot be moved by ballottement. The patient should be placed first on his back and then on his sound side, and bimanual pressure gently made, following the respiratory motions.

Dulness is sometimes found on percussion, especially if the abscess is superficial. On the right side the dulness is continuous with that of the liver behind, while on the left it is continuous with that of the spleen. If the suppuration involves the cellular tissues over the upper pole of the kidney, the dulness abruptly disappears above and goes into pulmonary resonance.

Edema of the lumbar skin is noted when the suppuration is extending outward, and the skin becomes diffusely red and tense as the abscess pushes towards it.

Fluctuation is sometimes present early in the course of the disease. More often it appears late, but usually not at all. In a case reported by Morris, in which no fluctuation could be detected,



FIG. 3.—Perinephritic abscess of the left side, showing obliteration of the ilio-costal curve; front view.

three quarts of pus were evacuated, while in some of my cases in which I could not detect fluctuation an equal quantity was removed.

Diagnosis of the source of the abscess.—Having made a diagnosis of perinephritic abscess, an attempt should be made in every case to discover the source of the suppuration. Formerly, many surgeons contented themselves with a diagnosis of perinephritic abscess, and opened the latter without concerning themselves as to its source; or, when the source could not be found on operation, they said the case was due to lifting, straining, a blow, or other traumatism.

It would take too much space to discuss this question in detail, and I shall content myself by giving a general outline of the points to be considered in the discovery of the source of the trouble.

In the first place, a careful history should be taken to find out what diseases the patient has suffered from recently, whether he or she has had any injury of the abdominal or thoracic cavity, or whether an operation has been performed in these regions. If such is found to be the case, the point of the inflammation, injury, or operation is the one which should be looked to as the source of the abscess.

If there is no such history, a systematic examination should be resorted to. The urine should be carefully examined for evidence of kidney disease. If pus is found in the urine, we should endeavor to determine whether it comes from the kidney, and if so, we should determine by ureteral catheterization whether it comes from the kidney on the affected side. It must be remembered, however, that a perinephritic abscess may be secondary to an abscess of the kidney when no pus is found in the urine, as in Fig. 5, case VIII. Generally, however, there is a suppurative process connected with the pelvis of the kidney, and pus will be found in the urine, as in Figs. 6 and 7, case VII.

If we cannot satisfy ourselves that the source of the trouble is in the kidney, we should make a thorough and systematic examination of the organs in the abdominopelvic and thoracic cavities. In making this examination we should have in mind the various conditions that may give rise to perinephritic abscess, mentioned above under *Causes*.

As an illustration of the ease with which a case of perinephritic abscess really due to renal causes can be mistaken for one originating from a jar or jolt, or from some other extrarenal cause, let me give the following case:

One afternoon I was called to see a patient, whom the attending physician told me had an enlarged kidney. Her symptoms consisted of a dull, heavy pain in the right side, accompanied with chilly sensations, fever, and sweats, lasting from a few hours to a few days at a time. She gave a history of a series of attacks of the same character during a number of years, and her former physician had always called them "malaria."

Examination showed a swelling in the right loin, and I felt a tumor in the region of the kidney that could be distinctly made out as a renal enlargement. Her temperature was 101°; pulse, 94; respiration, 36.

An examination of the urine showed evidences of a suppurative pyelonephritis. The patient was sent to the hospital in an ambulance later in the afternoon. On her arrival she was in a state of collapse, with a temperature of 104.5°, a pulse of 140, and 46 respirations per minute. She improved after a number of hours, during which restoratives and stimulants were administered. On the following day she was examined again.

In place of the regular enlargement which had been felt there on the previous day, there was now an indistinctly defined mass in the loin. An abscess of the kidney had evidently burst while the patient was on her way to the hospital, and the pus had gathered in the perirenal space, giving rise to a perirenal abscess.

A subsequent lumbar incision showed an opening in the kidney into which the end of a finger could be introduced, and which was the site of the rupture. A nephrectomy performed later on showed that the kidney had been almost destroyed in this case by a sclerotic nephritis, accompanying a suppurative process due to calculi. At the time of the opening of the abscess the finger in the cavity did not make out the presence of a stone in the kidney, and yet when the organ was removed the stone was found in a pocket connected with the opening in the renal cortex by a tortuous channel.

If her physician and I had not had the opportunity of examining her before and after the rupture, she would have entered the hospital with a history of malaria, in a state of collapse, and the perinephritic abscess would have been attributed, perhaps, to a blow

or jar received on the way to the hospital, or to some fall that she had sustained at home.

It must be remembered that when we find a perinephritic abscess that has existed for some time, and there is pus in some other neighboring localities, it is difficult to say whether the pus came from the other point and settled in the perirenal space; or extended from the perirenal space to these localities; or simply accumulated in this space as a *depôt* while traveling from one point to another.

It should also be borne in mind that after opening the abscess and washing it out the finger

firming the clinical diagnosis of a preceding tuberculous abscess.

The course of the abscess.—The course of the abscess varies. In the first place it may be absorbed after being walled off by connective tissue. These cases are rare, but Albarran has seen such a case at the Necker Hospital, and in one case at the City Hospital in New York (case VI) I observed the same fortunate occurrence. In such cases, of course, all the symptoms gradually subside, but it is important to note that a relapse may occur if an exciting cause, as traumatism, etc., is again brought into play.

Rupture of the abscess externally in the loin or into some space or viscus is a much more fre-



FIG. 4.—Perinephritic abscess of the left side, showing obliteration of the ilio-costal curve; rear view.

should palpate carefully the entire region for openings, howsoever small, in the surface of the kidney or adjacent structures, or for sinuses running up to more distant tissues. All such openings should be probed and examined with an electric light thrown into the cavity. In case VIII, Fig. 5, referred to in the foregoing, the tip of the finger could just be inserted into the abscess cavity in the kidney. There was no pus in the urine. The patient developed shortly after this a tuberculous knee, requiring amputation, and thus con-

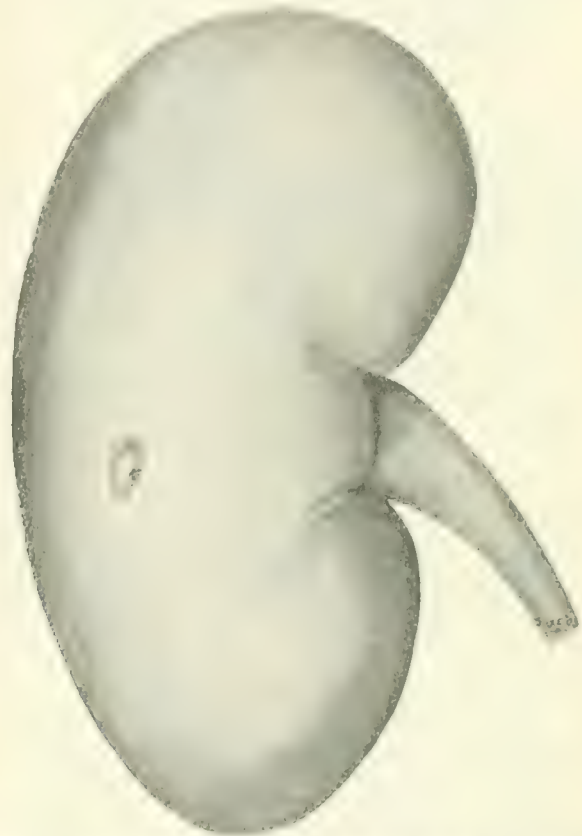


FIG. 5.—Posterior surface of left tuberculous kidney in a case of perinephritic abscess, showing opening of a suppurating focus which communicated with the perinephritic cellular tissues.

quent outcome than absorption. Rupture externally through Petit's triangle or any other part of the loin may be preceded by a fluctuation, and a more marked redness and tension of the skin. The abscess may then break, allowing an abundant flow of pus. The general symptoms, if they were acute, immediately subside to a marked degree; the fever is lower, the pulse improves, and the pain and strained position disappear. There are now two possible terminations. If there is sufficient drainage and the patient's resistance good, he may recover perfectly and the abscess heal. But if the suppuration continues, he may ultimately die of sepsis, unless again operated on. Very few perinephritic abscesses, however, rupture externally or into the thoracic cavity or the gastrointestinal or gastrouterine track, but die of

a slow septic process unless rescued by the surgeon's knife.

In cases in which there are septic thrombi or emboli in the renal vessels, the patients may die



FIG. 6.—a, Posterior surface of tuberculous kidney in a case of perinephritic abscess, showing the opening on the external surface, communicating with the pelvis, marking the point of rupture of the suppurative area; b, showing the contracted pelvis, now not much larger than the ureter, extending up to the point where it has broken through the capsule of the kidney as a perinephritic abscess.

in a few days, but fortunately, such complications are rare.

If the pus breaks into the pleural cavity through an opening in the external arcuate ligament of the diaphragm, the signs of empyema appear and the lumbar tumor becomes smaller. If it breaks into the lung through the pleura, it may be discharged through the bronchi by coughing. In this event, there may be a subsidence of all perinephritic symptoms, and the abscess may heal after evacuation through the lungs and bronchi. In most of these cases, however, sepsis increases or is prolonged, owing to deficient drainage, the lesions of lobular pneumonia or of gangrene of the lung may appear, and the patient may die from these complications.

Rupture into the colon, or some other part of the intestine, is followed by collapse of the lumbar tumor, and by a diarrhoea with thin purulent stools. Rupture into the renal pelvis, or into the ureter, is followed by a dysuria and a rush of pus into the bladder, which is discharged in large quantities in the urine. Rupture into the peritoneal cavity gives rise to the signs of diffuse purulent peritonitis, and death usually ensues in a short time.

When the abscess burrows along the psoas muscle, it gives the symptoms and signs of psoas abscess, with flexion of the thigh, adduction and

outward rotation of the limb, and a sensitiveness on extension (as in case II). The tumor is felt as a fluctuating mass at or below Poupart's ligament, and may extend down the thigh.

When the abscess extends into the pelvis, it may burst into the rectum, bladder, urethra, vagina, etc. In such cases there is a sudden purulent discharge from the parts concerned. Rarely an abscess burrows still further through the sacrosciatic foramen, and breaks into the sciatic region, beneath the gluteal muscles or on the back of the thigh.

The relative frequency of rupture in places other than the loin will be seen from the following table from Küster, who found such ruptures in 34 out of 230 cases; that is, in 14.78 per cent.:

Pleura and bronchi.....	18
Intestine	11
Peritoneal cavity.....	2
Bladder and vagina.....	2
Bladder alone.....	1

Differential diagnosis.—It would lead me too far to attempt to describe the differentiation of perinephritic abscess from every condition that may be mistaken for it. Among these, I may mention lumbago, typhoid fever, malaria, nephralgia, Pott's disease, hip disease, psoas abscess, lumbar wall abscess, lumbar hernia in Petit's triangle, abscesses and cysts of the liver, appendicitis, renal injuries with extravasations of blood into the lumbar region, renal tumors, hydronephrosis, pyonephrosis, parametritis, parovaritis, and even ovarian cysts.

In nearly all these conditions a careful clinical history and a thorough local examination, together with an examination of the urine and of the blood, will suffice to make a differentiation.

In nephralgia we have paroxysmal pains, of variable character and direction, but no feeling of pressure, no changes in the urine, no tumor or tenderness over the kidney, and no septic symp-



FIG. 7.—Stone of kidney, found in the abscess cavity, outside the kidney.

toms. Abscesses of the lumbar wall are more superficial, and do not give such widely referred pain as perinephritic abscess. In appendicitis, the abdominal pain usually is at first diffuse and later localized in the right iliac fossa. There is no pain or sense of fullness in the loin, nor does the pain of an appendicitis radiate through the abdomen to the genitals or thighs. In appendicitis the dulness is usually in front of the colon,

while in perinephritic abscess it is behind it. There are, of course, exceptions, as I found in a case which I operated on recently in which an indurated mass could be felt in the iliocostal space, and nothing in front, and yet the operation revealed an appendicular abscess.

Rupture of the kidney from traumatic causes may simulate perinephritic abscess, but the history of the case and the absence of fever, together with the external signs of shock, hæmorrhage, and hæmaturia will lead us to the correct diagnosis. These extravasations of blood may suppurate. In two of my cases of ruptured kidney, from each of which a gallon of blood and urine was evacuated, the space later filled with pus.

Tumors of the kidney are more circumscribed, and will usually be recognized by ballottement. The age of the patient (fifty or over), a history of pain and hæmorrhage, the absence of fever, and the presence of changes in the urine characteristic of tumor, will confirm our opinion.

The swelling of hydronephrosis is situated more deeply, is less diffuse, there is rarely any fever, there are no local superficial signs in the loin, and there is an intermittent or a permanent anuria on the affected side.

In pyonephrosis the pain is usually more paroxysmal, the tenderness on pressure less constant, the characteristic posture and flexion of the thigh are absent, and the urine shows the features of renal suppuration. It must be remembered, however, that a pyonephrosis may rupture and produce a perinephritic abscess, and the two conditions be present at the same time.

Treatment.—As soon as the diagnosis of perinephritic abscess is made, a lumbar incision should be made, from the twelfth rib downward along the outer border of the erector spinæ muscle. The perirenal space is opened, an escape of pus takes place, and the cavity is washed with some solution. The finger should then be introduced and the cavity explored. It is often surprising to note how extensive such a cavity is. The fingers sweep up and down, often going up to the diaphragm, and down into the iliac fossa, while the tips of the fingers may at times reach into the pelvis for a space, the depth of which cannot be determined without making a larger incision (see Fig. 2).

At times when the abscess is secondary to the rupture of a pyonephrotic kidney, adhesions have been formed between the organ and the posterior abdominal wall. In such a case, when the gush of pus subsides and the finger is inserted into the opening, it may be found to be in the pelvis of the kidney.

The first case of this kind I met with I mistook for a psoas abscess, and thought my finger was down on the psoas muscle, and that I was palpating the arches of the ligamentum arcuatum. In reality, I was in the pelvis of the kidney palpating very much dilated calyces.

It is exceedingly difficult for any one opening a lumbar abscess, without exploring the region with an experienced touch, to ascertain the exact source of the pus.

For this reason, the kidney should always be palpated carefully after a lumbar incision into a

perinephritic abscess to see if there is an opening into the kidney, or if the organ feels pathological, although if there is no sinus extending into or around the organ there is no necessity of separating it from the tissues in front of it, unless a nephrectomy is contemplated.

If at this time there is an opening into the kidney proper and the finger can be inserted into the pelvis, it can be enlarged by blunt dissection with the finger, forceps, or scissors in searching for stones or pus cavities, which should be removed or evacuated. If, however, there is but a small opening and it will not admit the finger, it is advisable to probe the opening and, if indicated, to incise through the cavity until the pelvis is opened, when its cavity can be examined.

If the patient's condition is such that no further exploration should be resorted to at the time of opening the abscess, the cavity can be washed out, a drain inserted into the deepest part and the lower part of the incision closed, with the idea of finishing the work in a few days, when the patient is better able to stand the operation.

When this time has arrived, the organ must be carefully exposed and examined in order to determine what this procedure should be. After bringing the kidney into view, it should be palpated carefully to see if there are any evidences of a calculus in any other part of the organ, or if other foci of suppuration are present. If there is a suspicion of such being the case, the organ should be treated as we have just indicated. In all but two cases I examined the kidneys carefully at the time of opening the perinephritic abscess, or later. Both of these patients were in such a critical condition at the time of the operation that there was no time for exploration of the kidney. Subsequent events proved the presence of suppuration in one case.

In four of the cases out of the fifteen that I have mentioned, the suppuration was due to the bursting of a nephritic abscess due to calculi. In one case I found the stone (Fig. 7) lying in the abscess cavity, outside of the kidney; in another the end of the calculus was protruding (Fig. 8), and was easily extracted from the kidney; in the third the calculus was not discovered until after a nephrectomy had been performed; and in the fourth after nephrotomy, the stone was easily found in the pelvis of the kidney.

In the four cases of tuberculous kidney, in all but one the opening into the kidney communicated directly with the pelvis. In the case in which the opening did not communicate with the pelvis, no pus had been found in the urine. In the three cases of pyonephrosis the openings also entered the pelvis.

The local treatment of the cases in which there is a sinus going into the kidney pelvis should be the same as in the operation for pyonephrosis, and depends on the general condition of the patient and the drainage. If the drainage is not good and pus accumulates, as is often the case, then the cavity must be reopened, the pus again evacuated, and thorough drainage established; or if constitutional symptoms continue, showing a septic condition, the loin must again be opened and the kidney explored.

The kidney can now be brought down and stitched to the posterior abdominal wall and a gauze drain or rubber tube inserted into it, or else it can be allowed to remain in place, with a drain into its cavity.

It very often happens that suppuration and an accumulation of pus will occur from time to

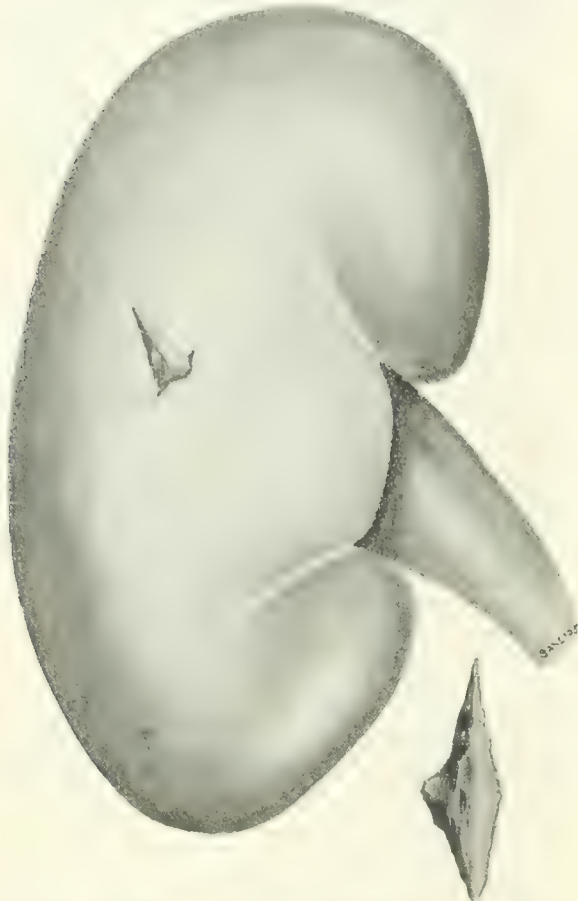


FIG. 8.— Showing calculus protruding, which was easily extracted from the kidney.

time, and on each occasion the patient's health will suffer from it. The prognosis in such a case is bad, whether or not something more radical is done to the kidney.

If nothing is found, but the kidney is becoming more and more disorganized and is thought to be functionally useless, the question of secondary nephrectomy will come up. Here we should be governed by the condition of the organ and of the patient. We know that in these chronic cases, where there is an old suppurative process, there is generally a great thickening and adherence of the two capsules, with or without an overproduction of fibrous or fibrous and fatty tissue. In this way the organ may not only be surrounded by a thick mass of indurated tissue and fat, or by a dense mass of fibrous tissue alone (sclerotic perinephritis), but a mass of fibrous tissue may extend up and down from the poles of the kidney, rendering operation difficult, dangerous or perhaps impossible. The upper portion of the fibrous mass extends to the arch of the diaphragm, the lower surrounding the pelvis and ureter, following the latter down for some dis-

tance along the leaflets of the perirenal fascia. If nephrectomy is attempted in such a case, the patient may die through the tearing of the adjacent tissues, allowing infection to spread; from the shock of a prolonged operation or from uræmia or asthenia. One patient on whom I performed nephrectomy under these conditions died of shock within a few hours. In three others I opened the peritoneal cavity in removing the diseased kidneys. One of these three died several weeks afterwards from sepsis, while the other two made uneventful recoveries. The peritoneal opening was sutured in one case and walled off in the other two. In the patient dying from shock, in attempting to free the kidney, I separated the organ from its thickened capsules with a few sweeps of the fingers. Had I been satisfied with this procedure and performed a subcapsular nephrectomy, this patient would in all probability have lived; but my more radical treatment ended disastrously.

Some operators are timid about performing a subcapsular nephrectomy, even when they can free the parenchyma from the capsule, on account of the difficulty of introducing the ligature inside of the capsule and of being sure that it will control hæmorrhage after the parenchyma is removed. It can be said, however, that if the ligature has been tied tightly and the kidney tissue is not excised, it will either atrophy or slough away and be discharged through the wound.

In any case, whether the kidney is the source of the abscess or not, free drainage should be established from the abscess cavity. In cases in which it is practicable, counter drainage should be made. In pelvic cases in women drainage can be made through the vagina.

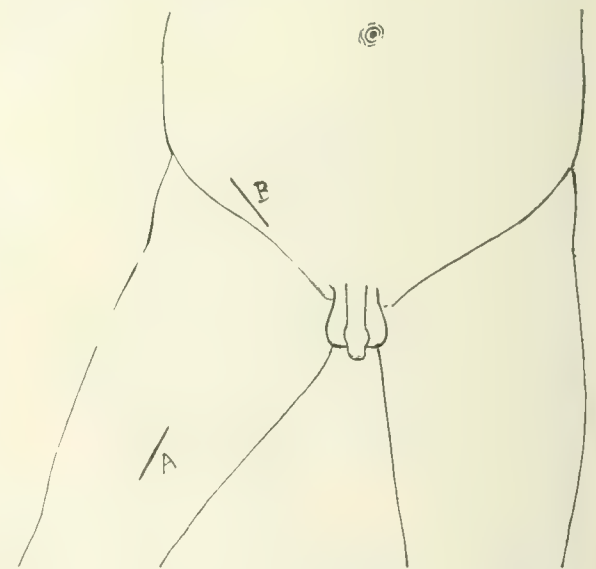


FIG. 9.—Showing opening in the groin and in the thigh made to drain a perinephritic abscess that had burrowed down into the thigh.

In the case of the woman with a perinephritic abscess due to rupture of a suppurating calculous kidney already referred to, there was also an accumulation of pus in the broad ligament on the right side of the uterus, which I opened and

drained through the vagina. In two other cases in which empyema and perinephritic abscess were both present (cases V and XIV), an opening was made both in the loin and into the pleural cavity. In case V the empyema was secondary to the perinephritic abscess, while in case XIV the perinephritic abscess was probably secondary to the empyema. The first patient died of general tuberculosis and sepsis. The second recovered, after a prolonged illness. In one of the cases of perinephritic abscess due to renal calculus (case II), mentioned in the foregoing, the pus burrowed down beneath Poupart's ligament to the middle of the thigh, so that counteropenings had to be made in the iliac region and in the middle of the thigh, as shown in Fig. 9. This patient made an uneventful recovery after nephrolithotomy and these counter-incisions.

Therefore, from whatever source pus comes or whither it extends, an attempt should be made to drain from that point as well as from the lumbar incision. It must be remembered that whatever organ or tissue is the source of the pus, it should be treated after the abscess has been opened and evacuated just as if it had been cut down upon independently of the perinephritic abscess.

After Treatment.—Immediately after the operation the cavity should be flushed out with bichloride solution, and a drain inserted into its deepest part, or into the kidney itself when it is involved and open. In case it is placed in the kidney, a tube should be used and packed about with gauze. This tube can be fastened to the side of the skin incision by a common catgut ligature. The drain can remain in place from twenty-four to seventy-two hours, when the gauze is removed and the tube allowed to remain in place. The wound should then be dressed each day, and the pelvis of the kidney washed out through the tube.

It is important in the detail of dressing to be sure that the drain is inserted down to the desired point. It has often happened in hospital practice to have the interne introduce the drain in some of the subsequent dressings between the muscular layers, or between the muscles and the skin, thus allowing the pus to accumulate again and necessitating the reopening of the wound. At the same time, care must be taken not to push the drain in with too much force, as in this way a fæcal fistula may be induced. In case IV, six weeks after operation, when the patient was up and about, though being dressed every day, a fæcal fistula suddenly developed. It gradually closed again, however, without operation.

Urinary fistulæ associated with this condition will often close spontaneously, after months of existence, under expectant treatment, and in one of the cases operated on, but not included in this group, eight years elapsed before it closed. In cases where a urinary fistula is expected to occur, after removing calculi, this occurrence may at times be prevented by the introduction of the ureteral catheter *à demeure*.

A thick perineal drainage tube of 35 or more French scale, or perhaps two such tubes packed about with gauze, is the best drain in perinephritic abscess. After operation sutures are generally inserted into the lower part of the lumbar

wound, and the drain inserted in the remaining portion.

Lumbar hernia very rarely occurs after these operations. At times I have left unsutured incisions three or more inches long without the slightest trace of hernia afterwards, while in other cases the sutures have given way, leaving even larger openings.

The general symptoms diminish almost immediately after opening the abscess. Sometimes the patients are so weak that it is necessary to open and evacuate the abscess under primary or local anæsthesia. In one case (case XV) the patient was nearly moribund, and was incised under local anæsthesia without his consent, after obtaining permission from his family. His recovery was uneventful. In such cases the cavity should not be explored until the patient's condition is somewhat improved in consequence of the operation.

Patients in whom the supplicative process about the kidney has been going on for a long time are often very septic and in a condition where as slight an operative procedure as possible should be resorted to on opening the abscess. Under a supportive and tonic treatment, together with good drainage, the virulence of this sepsis will rapidly decrease, when further explorations can be made or operations resorted to. In the majority of cases, however, the exploration of the kidney can be made at the time of the primary incision, as well as nephrotomy, in case an opening is found into the organ. The nephrotomy in this case would be simply enlarging the incision in search for pockets of pus or calculi. A nephrectomy should never be done at this time, but after the patient's condition has improved under treatment.

Results.—If not operated upon, there will be one of three conclusions: 1. The perinephritic abscess will either burst and discharge externally, or into the lung, peritoneal cavity, or pleural cavity, or into the hollow viscera. 2. In case it does not rupture so that the pus can be evacuated, the probabilities are that the patient will die of asthenia due to prolonged sepsis. 3. Absorption of the pus, followed by recovery may take place where the abscess is not extensive, as in case VI. It must not be thought, however, that all cases operated on survive. Küster's statistics of 230 patients showed a mortality of $34\frac{1}{3}$ per cent. Of the 15 patients already referred to, 3 died after nephrectomy, or 20 per cent. Those that were simply opened and drained, or upon whom nephrotomy was done, all recovered, with the exception of the patient in case I, who died later of sepsis and tuberculosis. The danger is minimized by early operation. The wound heals in from one month to an indefinite period, eight years in one case. Fistulæ remain in a little over two per cent. of cases, due probably to an undiscovered stone in the kidney or ureter or to a pelvic or ureteral obstruction from other causes.

In a summary of the fifteen patients reported herein, I may say that in fourteen patients the source of the pus was traced to the kidney. In one patient (case XIV) it was probably due to empyema. In another (case XV) the patient at the time was in such a dangerous condition that

a rapid incision was made without an anæsthetic, and he was too weak to permit a careful examination of the abscess cavity, and after the operation he refused further interference. Therefore, it is difficult to say whether the abscess in this case was of renal origin or not, but it presumably was, as he had a calculous cystitis and pyelonephritis at the time. In the other fourteen cases the kidney was involved.

In seven cases nephrotomy was performed (cases I, II, V, VII, IX, X, XI). In four cases nephrectomy was done (cases I, VII, XII, and XIII), three of the patients died, one of shock, another of uræmia, and another of sepsis. In case III a partial nephrectomy was performed. The kidney was very atrophic and adherent. The posterior half was removed with scarcely any hæmorrhage. The front part was so adherent to the adjoining tissues that it was feared an effort to remove it might cause laceration and infection, whereas if it were allowed to remain no harm could come from it, as its secreting function was practically nil.

CONCLUSIONS.

Having presented this subject, I should like to emphasize the following conclusions:

1.—Many more cases of perinephritic abscess are due to suppurative renal disease than is generally supposed, a fact which will be proved with the rapid strides that are now being made in renal surgery.

2.—Traumatism, exposure, and similar influences to which primary perinephritis is attributed, are not so important as many observers have claimed. They are often vaguely given as causes, when they are simply coincidences, or the active causes of rupture of already existing abscesses in the kidney or neighboring structures.

3.—It is important, though difficult, to determine the source and course of the pus. Therefore, before the operation pus should be looked for in the common urine and the separate urine by the ureteral catheter. During the operation the surgeon should try to determine whether the kidney is the source, and if not, what tissue or organ is. It is equally as important to discover the road taken by the pus, as it indicates where a counter opening should be made, and the further treatment of the case for complications.

4.—The elements of success in operations for perinephritic abscess may be summed up as follows:

(a) Early incision and evacuation before the pus has had time to burrow extensively.

(b) Thorough exploration, without timidity, opening the kidney and exploring the ureter if need be.

(c) Thorough drainage down to the deepest part of the sac by means of large soft rubber drains or gauze, the drain being kept in place until a well formed sinus exists down to the deepest part of the cavity.

(d) Nephrotomy, nephrostomy, or nephrectomy should be performed if indicated at the time of the operation or later.

75 WEST FIFTY-FIFTH STREET.

INTERMITTENT EXOPHTHALMUS, WITH REPORT OF A CASE.

By ELLICE M. ALGER, M. D.,

NEW YORK.

True intermittent exophthalmus is a very rare condition in which, owing to changes in the orbital veins, one eye is pushed forward to a greater or less degree out of the orbit into which it recedes as soon as the venous pressure again becomes normal, the process of recession being markedly hastened by pressure on the eyeball in front. Posey (10), of Philadelphia, who reviewed the subject very carefully in 1904, was able to collect from native and foreign sources 39 undoubted cases to which he added one of his own. Two cases have since been reported abroad in addition to the one described in this paper, making 43 in all. Some of the cases were reported under the name of "voluntary exophthalmus" since the patients could produce the condition at will by holding the breath, but in many others the term would be a misnomer since neither proptosis nor reposition were under control. In other cases the eye in the intervals between the attacks receded into the orbit further than its fellow, suggesting the name "alternating exophthalmus and enophthalmus."

In a typical case the eye proptoses whenever the head is in a dependent position as in stooping over, or whenever a venous congestion is produced by local pressure on the neck, or by muscular exertion as in lifting, coughing, and the like. The maximum displacement is produced in a few seconds and replacement takes but little longer. The condition has been confused with "pulsating exophthalmus," which is generally due to a rupture of the carotid into the cavernous sinus and produces a persistent proptosis with marked pulsation and bruit. In these cases the eye can be replaced by pressure but does not go back spontaneously while deep pressure over the vessels in the neck stops the pulsation and bruit and facilitates reposition. In intermittent exophthalmus, on the other hand, pressure only increases the symptoms, and while in a few cases the proptosis has finally become permanent this is the exception and not the rule. An early diagnosis from orbital angioma might be very difficult, but generally the exophthalmus is permanent and associated with pulsation and bruit, and while pressure does cause some increase in symptoms it is not at all marked. Hæmorrhage into the orbit would cause an exophthalmus which would in no sense be intermittent, but it must not be forgotten that hæmorrhage may occur at the beginning or during the course of true intermittent cases. Certainly there is no difficulty in distinguishing a typical intermittent case from any of these conditions.

The history of my patient is as follows:

Mrs. C. T. was born in Italy thirty-four years ago and has been in this country fifteen years. She thinks she had the usual children's diseases, and before leaving Italy was a sufferer from malaria. She married fourteen years ago and has had one child which is now thirteen, born healthy but now afflicted with an atrophy of one leg probably due to a poliomyelitis in infancy. She has had no other children but has had many miscarriages, these mishaps occurring twice a year during the last three years and several times necessitating hospital treatment of some sort. Eight years ago,

when not pregnant, she had an obscure illness which she calls malaria associated with fever, a stiff neck, and an intense headache, with chills occurring regularly at 2 a. m. and 2 p. m. for a week or more. At this time stooping made her dizzy but she thinks there was no involvement of her eyes. Five years ago, being in better health, she began to keep house and one morning, while putting on her shoes, her right eye swelled suddenly and became painful remaining in the same condition for five hours. She had a good deal of nausea and vomiting, but on reduction the sight of the eye was apparently as good as before. Since this time the eye proptoses more or less whenever she gets in a constrained position as in stooping, dressing, or doing the harder parts of her housework, and assumes the normal position when she straightens up or rests. She frequently wakes up to find the eye out of place and assuming that it was the result of sleeping in a draught has adopted the custom of covering it with a kerchief during the night. About three years ago she was in a hospital for treatment of a miscarriage when she had an acute attack of exophthalmus with great pain and vomiting. The eye was tremendously swollen for twenty-four hours and has since been blind, which she mistakenly ascribes to applications of ice made at the time. After leaving the hospital she was very much alarmed lest she lose the other eye and consulted Dr. Hubbell, of Buffalo. Upon being reassured on this score she has not paid much attention to her ailment. In addition to the slight attacks referred to she has had several of longer duration and these invariably began during sleep and were attended with more or less ecchymosis about the eye.

Status præsens. The patient is a delicate anæmic woman showing no abnormalities of her heart, lungs, or kidneys. Whether the frequent miscarriages are due to specific disease, uterine trouble or meddlesome midwifery I cannot obtain data enough to decide. When at rest the right eye is somewhat retracted into the orbit, as shown in the picture (Fig. 1), and also diverges slightly. When she stoops over, wears a tight collar, or pressure is made with the fingers behind the angle of the jaw the eye immediately begins to push slowly forward while a venous congestion of both lids is apparent (Fig. 2).



FIG. 1 — Exophthalmus of right eye, eye at rest.



FIG. 2 — Exophthalmus of right eye, proptosis produced by pressure.

At the same time there is present a distinct ptosis of the upper lid which varies with the amount of exophthalmus. I made no effort to obtain an extreme displacement owing to the fear the woman manifested of an acute attack being produced, but in a few seconds' time the eyeball would come forward far enough to obliterate the sulcus under the brow. At the time of the severe attacks the proptosis must have been extreme. When the pressure behind the jaw was removed the eye sank back into its place about as rapidly as it emerged and the process could be materially hastened by pressure over the globe. There was no pulsation or bruit about the orbit either during the proptosis nor in the interval. Moderate exophthalmus causes a feeling of congestion but is not painful. The vision in the right eye is completely gone, that in the left being normal. The pupils are small, of equal size, the right giving no direct reaction to light though a consensual reaction is present.

Ophthalmoscopic examination shows a rather pale eye ground with a white atrophy of the nerve. The arteries are very small, the veins being somewhat larger and rather tortuous. Pressure behind the jaw causes some increase in the calibre of the veins. One of the inferior temporal vessels showed a very narrow lumen and a thick deposit of white in the walls which may have been the result of obstruction but resembled strongly an arteritis which Haab considers specific.

There is no record of an autopsy on a case of intermittent exophthalmus and our knowledge of the pathological conditions is largely theoretical. The return of blood from the orbit is through the ophthalmic vein which passes backward along the inner wall of the orbit through the sphenoidal fissure into the cavernous sinus, eventually reaching the internal jugular.

Sometimes the small veins on the floor of the orbit unite to form a separate vein which unites with the other just before it empties into the sinus. There is also a vein communicating between the ophthalmic and the facial above the inner canthus.

The structure of the orbital veins favors the

formation of a varix, for they are without valves, are situated in loose tissues which afford no support, and have many bends and constrictions, especially at the inner angle of the sphenoidal fissure.

This tendency would be increased by (1) any unusual mechanical obstruction such as a narrowing of the fissure, the presence at the apex of the orbit of a tumor, an enlarged gland, or even some change in the size or arrangement of the ordinary orbital contents: and by (2) a weakness in the vein wall itself which might be congenital or the result of disease. The latter seems to be the more probable primary cause.

More than half the cases have occurred in males of adult age, which would indicate that muscular effort plays the same part here as in the venous engorgement of other parts. Development during childhood has been uncommon. There has been noted in a number of cases a rather indefinite history of previous traumatism while a study of others shows that the influence of acute infectious disease and syphilis on the blood vessels is not to be forgotten. It seems probable that a patient with a vein whose resistance has been lowered from any of these causes would, by reason of muscular work, tight neck wear, valvular heart trouble, or any factor which causes increased venous tension, develop a very tortuous ophthalmic vein which need not, however, produce any noticeable symptoms. This tortuosity would gradually grow till some strain, which has hitherto produced no noticeable symptoms, causes a kink or a constriction at one of the sharper turns and so stops entirely or in part the return flow.

Being enclosed in bony walls, except in front, the whole eyeball is pushed forward in proportion to the amount of stasis. As soon as the pressure in the cavernous sinus is lowered by change of position or rest from effort, the kink loses its posterior support, the vein empties itself and the eye sinks back into place. But after a forcible dilation of this sort, especially if it lasts some time, the vein never regains its normal tone while the orbital fasciæ have become so stretched that the exophthalmus can be produced by a much slighter retardation of the circulation in the neck. When the stoppage of the return flow is only partial the displacement of the eye may be very slight, but when it is complete it has caused an absolute dislocation of the eyeball and the proptosis may continue for days. In such a case the vein walls not infrequently rupture, causing an orbital hæmorrhage which exaggerates the local stasis and maintains the exophthalmus till a collateral circulation is established or the clot absorbed. Even in mild cases the pressure causes an absorption of the fatty tissues of the orbit so that when the veins are empty the eye sinks back farther than its fellow. In these cases of retrobulbar hæmorrhage there are often marked constitutional symptoms, such as pain, nausea, dizziness, and even coma.

The effect on the eye itself varies with the frequency and amount of exophthalmus. During the proptosis there is commonly more or less ptosis and change in the direction of the eye, with diplopia. Variations in the pupil, either contraction or dilation, have been noted with diminution of vision during the attack, while in the intervals the eye may seem in all respects normal. Temporary increase in

the calibre of the retinal veins with œdema of the nerve are regularly seen, while in the severe attacks the veins become very large and tortuous and are the sites of retinal hæmorrhages. As in my case, the nerve may be so damaged by the combination of stretching and pressure that it never regains its function and goes on to atrophy.

The prognosis may ordinarily be said to be good since no case of binocular affection has so far been reported and because the exophthalmus, though it becomes easier and more frequent, usually subsides quickly without affecting the vision. In expressing a prognosis the possibility of monocular blindness must not be forgotten.

The treatment is largely palliative, the patient being directed to avoid constricting neckwear, severe exertion or postures which tend to cause congestion of the head. The wearing of a snug bandage several hours a day has been advised. My patient, during the week or two she was under my observation, professed to be much benefited by treatment with the iodides, but as she was practically on a vacation, her general condition of life was unusually favorable.

Surgical interference in the present state of our knowledge could hardly be advised as a routine procedure, but would be amply justified when an attack does not subside speedily, especially if vision is failing. This would be indicated in cases in which the varicose tumor can be palpated or in which a retrobulbar hæmorrhage has evidently taken place. An exploratory operation after the method of Kronlein might permit the removal of the clot or even the resection of the varix.

The condition is a rare one and the literature on the subject is not voluminous. Although individual cases of intermittent exophthalmus had been previously reported, Dupont (1) was the first to give a description of the disease in a monograph which appeared in 1865. Since that time the most important articles have been those of Sattler (2), in 1880, of Yvert (3) (1881), Sergeant (4) (1893), Panas (5) (1894), Van Duyse (6) (1895), and Becker (7) in the same year. In 1898 Scheffels (8) and in 1900 Hitschman (9) published elaborate monographs in addition to which from time to time other observers have recorded cases without comment. The last article on the subject was that of Posey (10) in 1904, in which he gives a very discriminating and complete review of the literature up to that time. Scrinii and Bordeaux (11) reported one case in 1903, which does not appear in Posey's bibliography, and since then Pick (12) has made a very brief report of a case which is undoubtedly in this class.

Bibliography.

1. Dupont: Des tumeurs de l'orbite formées par du sang en communication avec la circulation veineuse intracranienne. *Thèse de Paris*, 1865.
2. Sattler, H.: Pulsierender Exophthalmus, Gräfe-Saemisch *Handbuch der Augenheilkunde*, vi, p. 879. (Varicose Venengeschwülste in der Orbita.)
3. Yvert: Des tumeurs de l'orbite en communication directe avec la circulation intracranienne. *Recueil d'ophtalmologie*, 1881, pp. 1-93; ref. Michell's *Jahresbericht*, 1881, p. 453.
4. Sergeant, E.: De l'exophthalmus intermittent ou exophthalmi à volonté, *Gazette des hôpitaux*, 1893, No. 60.
5. Panas: *Traité des maladies des yeux*, ii, p. 401.

6. Van Duyse, Daniel, et Bribosia, Edmond: Enophthalmos avec exophthalmie intermittente à volonté. *Archives d'Ophthalmologie*, xv, pp. 159-170, 1895.

7. Becker, H.: Ein Beitrag zur Kenntnis der Schleimcyste und Gefässgeschwülste der Orbita, *Archiv für Ophthalmologie*, xli, 1, p. 119.

8. Scheffels, O.: Ueber intermittierenden Exophthalmus und Enophthalmus, *Deutsche medizinische Wochenschrift*, 1898, No. 22, p. 347.

9. Hirschmann, R.: 1. Demonstration eines Falles von Exophthalmus intermittens und ausgebreiteten Phlebektasien in Bereiche der Venae jugularis, K. K. Gesellschaft der Aerzte in Wien., Sitzung vom 12 Jan., 1900; *Wiener klinische Wochenschrift*, 1900, No. 3, and *Ophthalmologische Klinik*, 1900, No. 5; 2. *Centralblatt für die Grenzgebiete der Medizin und Chirurgie*, iii, 13.

10. Posey, W. C.: Intermittent Exophthalmus, with Report of a Case. *Journal of the American Medical Association*, xlv, 7, p. 538.

11. Scrimé et Bordeaux: Un cas d'exophthalmie unilatérale par projection volontaire et intermittent due globe oculaire. *Archives d'ophthalmologie*, Paris, 1903, vol. xxiii, p. 795.

12. Pick: Exophthalmus intermittens, *Deutsche medizinische Wochenschrift*, xxx, p. 1363, 1904.

31 EAST THIRTIETH STREET.

STOOL EXAMINATION IN STARCH FED CHILDREN UNDER ONE YEAR OF AGE.*

By CHARLES GILMORE KERLEY, M. D.,

ATTENDING PHYSICIAN OF THE INFANT ASYLUM,

AND

WILLIS C. CAMPBELL, M. D.,

HOUSE PHYSICIAN OF THE INFANT ASYLUM,

NEW YORK.

The work, of which we will give a brief outline, was undertaken with the view of learning something of the digestive capacity for starchy food in children under one year of age, a subject upon which we have had many expressions of opinion and a paucity of facts.

All the infants upon which tests were made were inmates of the New York Infant Asylum. The advantage of making such a study in institution children is obvious, when we remember that the feedings of such patients (the amount of starch given for example), can here be kept in perfect control. Further, the test is more severe, for the reason that the institution child does not possess the vigor and vitality of those more fortunately situated.

The study comprises the observations made on 57 children, 519 stool examinations having been made. Because of defective technique and errors in the early examinations, which my time allowance does not permit me to discuss at this time, the findings in 27 children, comprising 353 examinations, are excluded.

The report to which we will call your attention covers observations on 30 children, 166 examinations having been made. The stools were collected as follows: One ounce tin ointment boxes with the child's name pasted on the cover were given the nurse in charge. A close watch was kept upon the children, who were so grouped as to make this possible. As soon as an evacuation occurred, a portion of the stool was placed in the tin box and sent to the laboratory. It was our intention to have at least one examination of a stool on five successive days from each patient.

In order to make the test a severe one, raw barley flour was used, which was cooked one and one half hours. In some cases barley water formed the milk diluent, in others, it was given plain, as the only nutriment.

The delicacy of the iodine test for starch is much greater than is generally supposed. A starch solution, 1 to 300,000, is given by Hill as the possibility of the iodine test. In familiarizing ourselves with the color changes, using starch solutions of various strengths, we found that a solution 1 to 10,000 reacted markedly to iodine.

The method which we found the most reliable and which was used exclusively in the 30 cases, was that known as the von Jaksch test. A considerable portion of the stool, a piece the size a pea or larger was placed in two drachms of water, boiled and shaken, so as to thoroughly disintegrate the fecal particles. A few drops of Lugol's solution were then added and the solution was filtered and cooled. If starch is present, the characteristic blue color appears. Filtration of the solution appeared to make but little difference as to the delicacy or reliability of the test. In the cases in which starch was not found, several portions of the stool were examined in order to make the examination a thorough one.

The ages of the 30 children were as follows:

Four were under four weeks.

Six were between one and three months.

Seven were between three and six months.

Nine were between six and nine months.

Four were between nine and twelve months.

Thirteen were in good health.

Seventeen were delicate, below normal weight and vitality. Of these seventeen, one had pneumonia and one had nasal diphtheria and was removed from the institution. Three had acute diarrhoea, five fermentative diarrhoea.

In two one examination was made.

In one three examinations were made.

In one four examinations were made.

In fifteen five examinations were made.

In five six examinations were made.

In three seven examinations were made.

In two eight examinations were made.

In one nine examinations were made.

In 16 children the examinations were persistently negative to starch. Of these, 11 were six months old or older, five being under six months. Among those under six months, one was 19 days old; he took 142 grains of starch daily, the stool being negative to the two examinations made on two successive days. One was five months 26 days old. He was given 375 grains daily. Five examinations were made, all being negative. One was five and a half months of age. For three days 450 grains were given. It was then thought wise to increase the starch and test his digestive capacity. 1,560 grains were accordingly given daily for two days. The stools failed to respond to the iodine test. One was one month and 22 days old. The patient's condition was thin and he had diarrhoea. Four hundred grains were given the first day, followed by a negative stool. Three hundred and ninety grains were given on four successive days, the stools remaining negative. One was one month 19 days old; 185 grains were given for three days, stools negative. The starch was then increased to 300 grains for two days, the stools remaining negative.

In five of these negative cases there was moderate diarrhoea, and in one severe diarrhoea.

Three cases were persistently positive. One was

* Read before the County Medical Society, November 26, 1905.

a well developed eight day old child, weighing eight pounds 5 ounces. For two days he received 255 grains daily, the stools showing positive to both tests. For the next three days he was given 127 grains daily, the stools still showing positive. The starch was then reduced so that only 63 grains were given in 24 hours. The stools showed positive during the two days of its administration. The second patient was a child nine months of age with acute diarrhoea. But 250 grains were given daily, five examinations on five successive days were made and all were positive. The third case was that of a three and a half months old child; there was a moderate diarrhoea, three to four passages daily. Six hundred grains were given daily, five examinations were made on five successive days and all were persistently positive.

Among the three persistently positive two had diarrhoea and one was very young.

The remaining eleven children showed sometimes positive, sometimes negative, sometimes red at the different examinations. As to those which reacted red I will refer later.

Four were positive in the majority of the examinations and are recorded as showing a positive tendency. All of these had diarrhoea.

Seven were negative in the majority of the examinations on the different days, and are recorded as showing a negative tendency. Five of these had diarrhoea. An interesting case in this group was in a child two months of age who had diarrhoea. On the first day he received 300 grains with an absence of milk from the diet. The starch reaction was marked. On the second day he received 200 grains, starch still showing positive. On the third day 300 grains were given and repeated on three successive days. As a result of cutting off the milk diet the stools improved and the examination thereafter for three days was negative for starch.

Of the 14 who showed starch at some time,

Three were under one month.

Three were between one and two months.

Five were between two and four months, making eleven under four months of age.

One was between four and six months of age.

Two were between nine and twelve months of age.

Among the 30 cases, 23 showed a good starch capacity. Of these, 11 had diarrhoea, seven showed poor starch capacity. Of these, one was eight days old, the other six had diarrhoea.

In the testing of solutions of starch of different strengths, plain and dextrinized, with iodine, it was found that a starch solution which was boiled, diastase added and then cooled, produced a pinkish red color upon the addition of iodine, this being the reaction of dextrin to iodine.

"The first step in the digestion of starch, is the formation of soluble starch, amylopectin. In the second stage, the soluble starch is decomposed into maltose and a substance giving a red color with iodine. This substance has been given the name of erythropectin by Brücke. In the third stage this erythropectin is further split up into a dextrin, which gives no coloration with iodine and is called achropectin and a further quantity of maltose. In short, the digestion of starch consists in breaking up by several more or less well defined stages through a process of gradual hydrolysis of a very

complex molecule into much simpler ones. Starch and water and the presence of a suitable ferment yield maltose and the different dextrans."¹

The dextrin reaction was present at times in ten children, having been found in 18 examinations. We interpret this reaction as meaning that dextrin was present in the stool, representing an incomplete starch digestion, due, perhaps, to the too rapid passage of the faecal contents, as it was present in several of the diarrhoea cases, or it was due to a deficiency in diastatic enzyme, not enough being present in the intestine to produce a complete splitting up of the starch product.

THE ROENTGEN TREATMENT OF LUPUS VULGARIS.*

By JAMES W. HUNTER, JR., M. A., M. D.,

NORFOLK, VA.

The year 1893 marks the beginning of an important epoch in the history of phototherapy. It was then that Finsen, believing that much could be accomplished by the scientific application of light as a therapeutical agent, began the series of experiments, which were to culminate in the invention that bears his name: I refer to the Finsen light. Nor was the year 1895 less notable. In that year Röntgen gave to the world the remarkable intelligence that there were rays other than those contained in our spectrum, and the equally successful experiment that he had photographed weights in a box. The discovery that these rays also possess a therapeutical power was reserved for another. On the 22nd of November, 1896, Dr. Leopold Freund, "prompted by a newspaper article in June, 1896, in which it was reported that a man working with x rays became afflicted with a dermatitis accompanied by extreme loss of hair from the head," determined to try the experiment of removing the hair from a large naevus pigmentosus pilosus in a girl. Thus it will be observed that the subject of phototherapy is but twelve years old, sciagraphy ten years, and radiotherapy but nine.

The results accomplished by the Finsen Institute at Copenhagen and at the London Hospital in the treatment of lupus have been most remarkable. Finsen, finding that the ultraviolet rays were the best, determined to use concentrated sunlight. This is generally considered the richest in actinic rays, but since it could not always be obtained in suitable strength, he determined to employ the electric arc. Thus he enclosed a pair of carbons in a telescope, and by means of suitable lenses, concentrated the light into a fine pencil. To be rid of the heat, the rays were passed through running water sometimes containing a small amount of methylene blue. The current used was 80 ampères at 50 volts, or 4,000 watts, an estimated candle power of 40,000. The pencil of light is directed upon the portion of skin to be treated, which in turn is rendered bloodless by the compression of another lens.

Unfortunately, the work of Finsen's American followers has been disappointing. Probably the cause is this. The original instrument of Finsen is very expensive, and quite wasteful of electrical

¹ Schaefer's *Physiology*.

* Read before the Seaboard Medical Association of Virginia and North Carolina, Newport News, Va., December 5 to 7, 1903.

energy; the American manufacturer has sought to cheapen matters. Thus, two carbons, such as we see employed in the ordinary street lamp, are used with about the same amount of power (5.2 ampères at 75 volts). The result is easily anticipated; hence the American discouragement. Good Finsen work cannot be accomplished without the best and most powerful apparatus. Fortunately there has been a revival of interest. I recently read an article by a New York specialist in which he stated that he is now using a current of 100 ampères. Good reports may be expected.

While the ideal Finsen treatment is only to be found at Copenhagen or London, good Röntgen work is easily obtainable. Yet there were almost as many schools as operators, each one finding from experience the conditions under which his apparatus worked most favorably. It is only just now, upon the ninth anniversary of Freund's experiments, that we are beginning to place the Röntgen treatment upon a scientific basis. The size of coil or static machine, the various windings of the primary and secondary, the amount of current, speed of interruption and quality of tubes, have each its own advocates. Nevertheless, I am thankful to report that the numerous operators are finding that the conditions under which their best work is accomplished, show a wonderful uniformity of agreement. The ideal is in sight.

I have selected the subject of lupus vulgaris, for I know of no disease whose treatment has been so thoroughly revolutionized. The older methods of internal medicants, curettements, ointments, and caustics, have almost passed away. We are now prepared to tell our patients that with proper treatment almost all cases of lupus are curable with but little resulting deformity. Wearied of life, his hopes, ambitions, money and friends gone, many a victim of lupus has suddenly awakened to the realization that a new force has sprung into being, and that he too can become a useful member of society. Though of no effect upon the prognosis of life, there are few things so disgusting as a large lupus patch upon the nose. And this is the region which it usually seeks.

We can afford our patients some relief, though in a few instances success has not been obtained, and in others successively recurring patches require successive treatment. As to the comparative methods of the Finsen and Röntgen treatments, we shall consult Dr. Freund. I quote from his recent work:

"There are a few drawbacks to set against the advantages of this method (Finsen's), its efficacy, its elective action on lupus whilst preserving all sound tissue, its painlessness, its excellent cosmetic results, its freedom from unpleasant and unexpected after effects. The method demands a large plant, which is costly both to buy and to maintain in operation (on account of the powerful current required); it necessitates a trained staff of attendants, and by its tedious course it makes great demands on the patience of both doctor and patient, and requires from both considerable powers of physical endurance. . . . Objectively considered, the Röntgen treatment is certainly simpler; the tube needs only to be directed rightly on the patient, and, provided he remains still, he can then be left to himself and there is no need of specially trained attendants. The

duration of the single sittings is much shorter than with the Finsen treatment, and the Röntgen treatment is just as painless; the area which it is possible to treat each time with the x rays is much larger than with the Finsen treatment, and the appearance after treatment is quite as good. But on the other hand we must consider that even though the Röntgen treatment does not require so efficient a staff of attendants it presupposes in the operator great experience and practice, and demands from him, not indeed the same physical endurance, but the capacity of judging correctly and measuring the intensity of irradiation, the suitable time of exposure, etc., whilst with the Finsen method no such niceties have to be taken into account."

Thus the merits of the two treatments are about equal: the one requiring an expensive equipment, a large amount of energy, and a considerable physical endurance of both physician and patient; the other a nicety of judgment and an unusual skill. Granting that the operator in either case be a man of the requisite ability, the advantages are with the Röntgen treatment. It is less wearisome and cures more quickly. There may be of course cases curable by the Finsen light that are wholly unaffected by the Röntgen ray, and vice versa; but judging from the reports that I have read, the advantages here, as above, are distinctly in favor of the Röntgen treatment.

In a recent paper before the Medical Society of Virginia, I have tried to explain that: 1, The changes following Röntgen irradiation occur in the cells, not in the surrounding tissues; 2, the malignant cell, while of a more rapid growth than the normal, is less resistant; and 3, the more nearly the resistance of the diseased tissues approaches that of the normal the more difficult is the cure.

The first two propositions need but little comment. Since the Röntgen ray is a destructive agent and the life of the body depends upon the life of its component cells, it is very evident that we must kill the diseased cells if we wish to conquer the disease. Again, everybody is familiar with the large sloughing areas resulting from a malignant growth; these are caused by a breaking down of the older cells. The third proposition requires some explanation. The whole object of Röntgen therapy is to remove the diseased or malignant cell without affecting the normal. The lesser resistance of the diseased cell must be overcome. As epitheliomata are far less resistant to the ray than the normal skin, healing may be produced with but little dermatitis. But, since lupus is a bacterial disease and of an unusual endurance, the dermatitis must be carried as far as practicable,—yet not too far. A considerable margin must be allowed for safety. Too much irradiation will have the effect of the actual cautery. Herein lies the nicety of treatment.

Upon this process of reasoning, and the fact that the irradiations are cumulative in their action, the various operators have founded their technique. That most used is a modification of Schiff's and Freund's original suggestion. Personally, I employ a 12 inch coil with two layers of the primary connected in series (there are three of these layers in my coil), a moderate interruption (10 per second), and a primary current of 2.5 ampères at 110 volts, D. C. Such a current produces a thin spark from

4 to 6 inches in length, and, with a medium soft tube (self regulating; 6 inches in diameter) at 10 inches (from target), should produce a dermatitis in from 90 to 100 minutes. The patient is protected by a covering of lead foil, holes being cut where the skin is to be exposed. For this purpose I use the heavy foil on tea chests. This is comparatively inexpensive, so that every patient has his own mask.

Some objection may be urged against the employment of a 110 volt current: many operators prefer one of 20 to 30 volts, claiming that a high voltage is more liable to produce a dermatitis. Fortunately, we are beginning to realize that the wattage of both primary and secondary is the same, and that with a proper selection of coil, arrangement of the primary layers and attention to the rheostat, the same results may be accomplished. Moreover, the "burning" does not lie in the voltage but in the tube, a soft one producing a greater dermatitis than a hard, and a new one than an old. For my own part I prefer a well seasoned tube, but by a skillful alternation of high and low and old and new, any desired effect is easily obtainable.

So much for our materials: we must use them (as Sir Joshua Reynolds would say) "with brains." Our object is to get the patient under the influence of the rays as quickly as possible, and yet to avoid an unnecessary overdose. Hence with our 90 minute current, we shall give daily exposures for the first three or four times (I aim to give four exposures during the first week) of 10 minutes (if more than one place is to be treated, daily exposures of five minutes may be employed), and then three times a week for six more sittings. By this time a slight dermatitis should be observed. But since we cannot tell whether a sufficient dosage has been given, it is well to wait for another week. The maximum effect has now been reached. If not sufficient, one, two or three more sittings are given with an interval of at least three days (or biweekly), until a very decided dermatitis results. The original trouble is much aggravated,—a heavy scab, often bulging forward; an exquisite itching; and, most likely, a profuse discharge. Gradually the dermatitis subsides; healing ensues with desquamation. If, however, there has been no healing by the third or fourth week after the last exposure, sittings are again resumed, but of less duration and more infrequently.

There is no objection to the administration of suitable medicines at the same time that the Röntgen treatment is continued. In a deep involvement it is well to employ some fluorescent drug. Following the example of Pusey, I have employed sodium cacodylate, and can testify to its effectiveness. This is given in doses of one half to three fourths of a grain three times a day after meals. A simple dressing on the lupus patch itself, such as boric acid vaseline, is unobjectionable, though a heavy scab is much to be preferred. The iodides or arsenic may be administered, if it is deemed well to aid in the removal of the broken down tissues. Tonics, bitters, carminatives, cathartics, etc., are to be used as needed. In other words, the employment of the Röntgen ray should have no effect upon the treatment of other conditions.

The cures of lupus vulgaris seem to be permanent, though as the new method is in its infancy, a great deal of observation is yet necessary. No matter how

perfect any treatment or operation, some relapses may be expected. This, however, is no reason for the non-employment of the ray; a few more sittings will generally relieve. Of my many cases, only one has thus far suffered a relapse. That was in a boiler maker; but, judging from the amount of grime attending his vocation, I am inclined to believe it a re-infection rather than a recurrence. My worst case was one of 22 years' standing, involving the entire nose of a gentleman, aged 67; yet six months after the last irradiation there is nothing to be observed save a healthy scar. The cosmetic result is excellent. The Röntgen ray is thus a destructive agent, its sole office being the removal of diseased tissue. Nature herself must repair the lesion. Its selective action, short sittings, painlessness of application, cumulative effects, and excellent scars make it by far the most effective therapeutical agent that we now possess.

A CASE OF ACUTE RETROBULBAR NEURITIS PROBABLY DUE TO SINUSITIS.*

By WILLIAM ZENTMAYER, M. D.,

PHILADELPHIA, 1

ATTENDING SURGEON, WILLS EYE HOSPITAL; OPHTHALMOLOGIST
TO ST. MARY'S HOSPITAL.

Perhaps no one phase of ophthalmology has engaged so much of the attention of clinicians of late as the relation of sinusitis to ocular affections. The subject has been treated in such an exhaustive manner by Ziem, Fish, Paunz, and quite recently by Posey, that my object in reporting the following case is not for the purpose of affording a text for again reviewing the subject, but to invite discussion from those who have not heretofore favored us with their experience and views, and from those whose knowledge of the subject we know to be extensive.

It has appeared to me that the most that has been proven in some of the cases reported has been the coexistence of the disease of the sinuses and of the eye. The evidence of a direct causal relation has often been insufficient, and I believe my own case to be open to this criticism. Such a case, however, is reported by Pihl (*Klinische Monatsblätter für Augenheilkunde*, July, 1905), in which a relapsing empyema of the antrum was at each recurrence accompanied by the symptoms of a retrobulbar neuritis, leaves no room for doubt. My own case is as follows:

F. B., female, colored, aged 27 years, single, employed as a cook, came to Wills Hospital Sept. 9, stating that four days previously vision began to fail in the left eye, every object looked at having a black spot over it, at the same time she suffered with severe pains all over the head, later localized to the left temple and finally extending to the left ear and left shoulder. At the time of the attack the patient lived at Atlantic City. Last April she had a severe attack of inflammatory rheumatism remaining in bed until June first. Eight years ago while living in New York she suffered from a similar attack. During the past four years she has been in very good health.

Right eye vision = $\frac{5}{10}$; left eye, counts fingers at 18". The pupil of the left eye was semi-dilated and scarcely reacted to light. T. N. There was a small, al-

*Read before the Section in Ophthalmology, College of Physicians of Philadelphia.

most hemianopic, candle field extending outwardly from the temporal side of fixation. There was soreness upon backward pressure of the eyeball. The ophthalmoscope showed in the affected eye unusually broad pigment border to the iris at the upper inner margin of the pupil. There was enormous distention of the veins and intense striation of the retina with veiling of the nasal border of the disc. In the right eye the veins were slightly enlarged and the nasal margin of the disc was veiled.

Dr. Weisenberg reported that there were no nervous symptoms other than the neuralgia. The blood examination made by Dr. Hay showed a slight simple anæmia and no leucocytosis. The patient was sent to the Polyclinic for examination of the nose and sinuses. The first report received was negative. She, however, was given atropine in 0.005 grain doses and was directed to report triweekly for treatment. Five days later she stated that she was suffering much less pain in the head. Ten days subsequently vision having sunk to bare light perception and there being a recrudescence of pain she was admitted to the Wills Hospital and ordered 15 grains of sodium salicylate and 0.005 of atropine three times in a day and 1 drachm of unguentum hydrargyri by inunction twice in a day. She continued to suffer considerable pain during the first few days' stay in the hospital but there was a rapid subsidence of the venous congestion of the retina. On Oct. 17 a note from the Polyclinic from Dr. Hitchler stated that they had neglected to say in their first note that they suspected a closed sinusitis on the left side and that to-day they were sure of the existence of a purulent inflammation of at least the frontal and frontoethmoidal cells. Dr. Hitchler advised pushing the atropine to its physiological limit. On Oct. 28, the nerve was almost paper white, the vessels about normal in size and vision nil. She was free from pain. The same condition exists to-day.

Acute retrobulbar neuritis is not a common affection. Its symptoms are few and not at all characteristic. There is a rapid failure of vision beginning in the centre of the field and often restricted to this area or extending with more or less rapidity so as to include the whole field. The involved area may be totally dark or the obscuration may be partial, producing but a mistiness or cloudiness and an unsteadiness of sight often compared to heat rising from the pavements. Vision is always better in a dull light. Even if reduction of vision is only slight, there is impaired light sense. Color perception is very defective and already in the early stages, when the vision for form is normal a central color scotoma exists. In the beginning the appearance of the fundus may be normal and it may continue so until the pallor of atrophy sets in, but usually before this occurs there is distention and tortuosity of the veins which may become very pronounced and is then frequently accompanied by some contraction of the arteries. At times there is a marked papillitis with hæmorrhages. The pupil will be found dilated proportional to the loss of vision, and irresponsive to light stimulus. The succeeding atrophy may be confined to the papillomacular segment of the disc or it may involve its entire surface. Gunn points out that loss of vision may not be commensurate to the pallor of the nerve head. Complete permanent blindness is a very rare outcome. An early and important diagnostic symptom is pain. It is usually severe and may be simply retrobulbar or involve the side of the

head corresponding to the affected eye. There is commonly pain on pressure of the eyeball back into the orbit and on movements of the eye.

In a recent discussion of the subject based upon the study of 350 cases of retroocular neuritis Gunn makes the following classification: A. Inflammation communicated to the nerve from neighboring structures. B. Inflammation or other rapid changes occurring initially in the optic nerve. He divides the latter class into two subclasses: 1. Local manifestations of a general disease, limiting these to tubercle and gumma. 2. Primary retroocular neuritis including here insular sclerosis, influenza, gout, ptomaine poisoning, disorders of menstruation, blood disorders (including malaria), arterial disease, and mental or traumatic shock. He points out the seemingly toxic character of most of the causes in the last group. In direct connection with the case under consideration, it is of interest to note that in 18 cases the trouble was considered to be due, probably to disease of the sphenoidal sinus. In 11 of these both optic nerves were involved, and in 16 there was great loss of sight. The early stage of such a case presents some difficulty in diagnosis. The greatly impaired vision without marked ophthalmoscopic changes associated with an almost hysterical state, owing to the pain arouses a suspicion of hysterical amplyopia which, however, is dispelled by the absence of iridal reaction and the inability to prove malingering. The severe pain, the unusually marked impairment of vision (the history of two previous attacks of inflammatory rheumatism) suggest rheumatic periostitis (a very doubtful condition), or a rheumatic inflammation of the sheath of the nerve. The fact, as stated by Leber, that all inflammations of the contents of the orbit, with the exception of metastatic cases are secondary to inflammation of the contiguous tissues, together with the fact that Lapersonne found that 20 per cent. of cases of empyæma of the accessory sinuses were complicated by inflammation of the orbital contents and the existence of such a condition in this case, the severity of the attack, the quick abatement of the pain after the use of atropine, and the treatment of the intranasal inflammation makes it likely that the retrobulbar neuritis was secondary to the sinus inflammation. A rheumatic inflammation of the sclerotic has been suggested as the cause. The absence of early changes in the nerve head and the late appearance of pallor puts the lesion far back, probably in the optic canal.

1819 SPRUCE STREET.

REPORT OF AN EPIDEMIC OF MEASLES IN MEXICO.

By BERNARD L. WYATT, M. D.,

SAN JOSÉ, TAMAULIPAS, MEXICO,

RESIDENT PHYSICIAN AND SURGEON TO THE SAN CARLOS COPPER COMPANY.

The disease measles, or *saranpión* (as it is called in Spanish), is encountered in all parts of the Republic of Mexico.

It is most prevalent during the late autumn and winter; and in numerous mining camps where the natives live in crowded quarters under poor hygienic

conditions, epidemics are of frequent occurrence. The disease as we find it in Mexico resembles more or less closely measles as it prevails in the United States, but has, nevertheless, certain general differences worthy of mention.

During the prodromal stage, before the appearance of the rash, there are the usual catarrhal symptoms with very slight elevation of temperature, but it is exceptional for the prodromata to equal in severity those met with in the States.

In the San José epidemic of 81 cases, which have furnished the greater part of the data for this article, recurrent epistaxis was present in over 55 per cent. of the cases during the prodromal stage. In a small proportion of the cases it was practically the only symptom during the first three days, aside from a very slight elevation of temperature, all other signs being absent. In connection with the epistaxis it is important to note that San José lies at an altitude of 2,250 feet, which may in part account for this manifestation.

The symptoms of the stage of eruption vary but little from those of the eruptive stage of measles as met with in the States; they are, however, much less intense in severity. The eruption itself is the well known maculopapular eruption so familiar to all, but in 4 per cent. of the San José cases it was present only upon the forehead, face and posterior cervical region below the margin of the hair. Another point of interest is that in more than 50 per cent. of my cases the temperature did not exceed 39.5° C. during the stage of the eruption, and I am reasonably certain that the epidemic in question was of the severity that is usual to the disease in the Republic of Mexico.

It is the rule rather than the exception for the temperature to be noticeably higher during the night than in the day, fever during the early morning hours being often entirely absent. Two of the cases occurred in children under five months of age, one of which had a pyrexia of only 0.5° C., yet the eruption covered the entire body and all the symptoms characteristic of the disease were present. Convalescence was uneventful and recovery complete. Koplik's spots were present in about half the cases seen.

Complications and sequelæ are neither so common nor so serious as in the States. Bronchopneumonia is of comparatively rare occurrence either as a complication or sequel of *saranpión*, and of the 81 cases in the epidemic under consideration only two patients had it; both of these recovered.

The San José cases occurred among people living in thatched roofed huts under the poorest of hygienic conditions. All the children who had the disease were more or less debilitated and marasmic. Proper food was not to be obtained, goats' milk being the chief article of diet for the little ones, while tortillas and beans constituted the chief food of the elder members of the family. The huts, already overcrowded with human beings, usually served as a shelter for hogs and hens, and it was often necessary for me to drive away these animals in making my way to the bedside. The annual bathing day (*El día de San Juan*) occurred on June 24th, and the time of the epidemic was in the autumn, so that these patients were probably not on very intimate terms with soap and water. As a

point of possible interest in this connection, within a week I have seen a baby a month old whose first bath was still a thing of the future. The absence of serious complications as a result of this extreme filth is truly astonishing.

Enterocolitis was a common sequel in this epidemic; it is very frequently encountered in Mexico as one of the sequelæ of *saranpión*, 26 per cent. of my cases showing this condition, which was not, however, of a severe type, but yielded readily to treatment. The complications observed were: Catarrhal otitis media, eczema, and acne disseminata. Otitis was developed in 4 per cent. of the cases, acne disseminata was seen in 3 per cent., and one case of eczema was observed.

Notwithstanding the unhygienic conditions which prevailed among the patients throughout the epidemic, only two patients out of the eighty-one died. One of these, a little girl of about two years, had a very malignant form of the disease, delirium, convulsions, and persistent hyperpyrexia being prominent features, death occurring on the fourth day. The other case presented no features of especial interest.

As a rule little or no medicine is required during the progress of an ordinary case, but the native Mexican of the peon class cannot be brought to comprehend the rationale of such treatment. Here in Mexico the patient must take a tablet every 15 minutes, his body must be anointed with a liberal supply of herbs of various kinds, he must be covered with blankets almost to the point of suffocation, and the "north wind" must be conspicuous by its absence if, according to their belief, a fatal issue is to be averted. As a matter of fact, I employ but few drugs in the treatment of my cases; ammonium chloride, calomel, ipecac, and paregoric constituted practically the entire list.

MESSAGE IN CHRONIC METRITIS AND MALPOSITIONS OF THE UTERUS.

By GUSTAV NORSTROM, M. D. (STOCKHOLM),
NEW YORK.

In my previous article¹ I spoke of the development of the treatment of diseases of women by massage as well as of the technics of massage in uterine diseases. In the following I am going to treat of uterine affections in which massage is particularly indicated.

But first I wish to devote some space to the pathology of the uterus and its annexa, as this, in my opinion, will render the subject more interesting and more easily understood.

I will begin with *chronic parenchymatous metritis*, as this affection is the one which more often falls into our hands for treatment.

It is really curious to observe with how little attention many authors discuss chronic metritis. The word endometritis is mentioned over and over again, whereas the term chronic metritis is scarcely alluded to and, if mentioned, only en passant. I am glad to see that Doléris² tries to give parenchymatous metritis the place in pathological anatomy of metritis which it undoubtedly deserves. But Dr. Theilhaber and Dr. Lorenz were the first

¹ *New York Medical Journal*, December 23, 1905, p. 1312.

² Doléris, *Métrites et fausses métrites*. Paris, 1902.

to throw real light upon the subject of chronic metritis³. As an introduction to this last named essay the author speaks of how Scanzoni in his well known monograph on chronic metritis succeeded in satisfactorily describing the only clinical and microscopical picture of the disease. The microscopical picture, however, was not so clearly defined. Fritsch (*Chirurgie von Lütke und Billroth*, LVI) is the first who has undertaken more thorough studies on chronic metritis, though he had made them at an epoch (1885) when it was extremely difficult, not to say almost impossible, to procure uteri showing the change of chronic metritis. As such wombs at that time were not extirpated, the material for researches of this kind was very limited. Post mortem specimens were practically only available, and these generally showed a congestion (*Blutfülle*), the result of the real cause of death. Dr. Theilhaber's investigations were based on not less than over 100 uteri removed through operations as a last resort for uterine hæmorrhages. He proved conclusively that the prevailing notion at that time, namely, that in inflammatory diseases of the uterus the endometrium is the primary seat of the trouble, is erroneous.

It requires uterine contractions to help the venous blood to return towards the heart. If these contractions are insufficient, a venous stasis will develop which, if persisting, results in hypernutrition of the organ with increase of the connective tissue at the expense of the muscular system. Hence dilatation of the veins and increasing of the "insufficiency." The hæmorrhages are the consequence of the venous stasis. On account of its weakened condition, the musculature during the menses contracts incompletely; consequently the torn blood vessels will not be sufficiently compressed.

The only primary endometritis is that of gonorrhœal origin. This infection, instead of advancing into depth attacking the parenchyma, shows a greater tendency to extend along the mucous membrane of the uterine cavity, finally invading the tube, the ovary and the peritonæum.

On the contrary the process is primary in the mesometrium and not secondary to preexisting inflammation in the mucous membrane. Theilhaber and Lorenz state that diffuse thickening of the mucous membrane in uterine hæmorrhages is very rare, never exceeding 3-5 millimetres. Even microscopically were they unable to discover any noteworthy alterations of the mucous membrane. The parenchyma was always increased in quantity and the microscopical examination showed a most distinct decrease of the muscular tissue and at the same time an increase of the connective tissue. Besides, in cases of longer duration, there was an increase in the number of bloodvessels as well as a more or less marked dilatation of the veins, even extending into the broad ligaments. In a word, a real hyperplasia of the connective tissue of the parenchyma of the uterus had taken place. With such views on the relationship between endometrium and mesometrium in inflammatory disease of the womb Theilhaber naturally does not favor curettage for uterine hæmorrhages. He expresses him-

self as follows about the matter: "Curettage so commonly employed seems not to have had any important influence upon the hæmorrhages." "Occasional benefits must probably be ascribed to other causes. Generally a few caustic applications to the scraped surface are necessary after the curettage to complete the cure. Probably a large proportion of the good results are attributable to the contractions of the uterine musculature following these applications. On the other hand the first menstruation after curettage may be accompanied by marked hæmorrhage which will not harmonize with the idea that the curettage has removed the real cause of the disease. It is possible, of course, that curettage may be beneficial through the relief of the venous stasis."

I shall first discuss a symptom which is not uncommon in the course of chronic metritis, i.e., endometritis, namely, uterine hæmorrhages. The ætiology of this has already been sufficiently discussed. Generally, menstruation is prolonged in this condition. This can only be regarded as abnormal if the flow lasts longer than ordinarily. Hæmorrhages occur also often in the intervals between the periods. Generally the interval is shorter and frequently the period lasts so long that there is almost a constant flow, and the patients are unable to definitely say how long the period really lasts. It is then not surprising that the patients become anæmic. I have often wondered how some of them can sustain such a great loss of blood for a long time without becoming markedly weakened thereby. The only reason can be because their appetite and digestion remain good. Massage must be employed here in a very gentle manner, otherwise the flow is apt to be increased instead of diminished; there is, however, no reason for pressing hard, as the uterus is in these cases commonly of a soft consistency, consequently massage can more easily act upon the parenchyma, and through the latter, upon the endometrium. Following Brandt's advice, I have often radically cured cases where improvement had been despaired of, and where the hæmorrhage had been so abundant that, on withdrawing the two fingers from the vagina, not only the hand but even the forearm was covered with blood. I do not deny that the time required to cure these cases was very long (two or three months).

What the action of massage in these cases was, I am unable to explain. In all probability it decreased the venous stasis and quickened the circulation, thus tending to reestablish normal conditions.

CASE I.—Mrs. G., 34 years of age, dressmaker, came in July, 1877, to the clinic of Dr. Pacquelin. Patient is married, and mother of a little girl three years old.

This person is a striking example of how the general state of health, although suffering from repeated and profuse metrorrhagias, may remain satisfactory as long as the digestive functions are normal.

Some months after the first delivery a second pregnancy was terminated by a miscarriage in the third month. There was an abundant loss of blood, which the physician who was called in was able to check somewhat, but not entirely. For six months the patient had to keep to her bed, losing more or less blood. Ice, tamponing with alum, perchloride of iron. But it was impossible to entirely stop the hæmorrhage. Per-

³Die sogenannte chronische Metritis, ihre Ursachen und ihre Symptome, von Dr. A. Theilhaber, in: *Lehrbuch der pathologischen Anatomie der chronischen Metritis*, by Dr. Lorenz, München, 1903.

sistent serosanguineous discharge continued. After some time there was a slight amelioration. But the anæmia and the weakness were so marked that she was frequently subject to syncope, even fainting in the street. Patient suffered from pain in the back, shooting pains in the loins, frequent micturition; she was nervous, excitable, irascible. There was palpitation, and dyspnoea appeared on the slightest physical or mental exertion.

This person has gone from one hospital to another, and has undergone various treatment without obtaining anything but transitory relief.

The first time I saw this patient I was struck with the relatively good state of her general health. She was pale, but stout, and did not seem to suffer much. And yet the menorrhagiæ, or the metrorrhagiæ, were profuse while walking, and even while at rest. The uterus was somewhat soft and in retroflexion; quite movable, a little enlarged. Deep pressure in the left cul de sac gave me the sensation of a swelling. This exudate corresponded to the lower part of the broad ligament. It was rather soft to the touch, diffuse, painful on pressure, and coincided with a spot where the patient had always complained of a sharp pain. The neck was large. Through its external orifice, which was dilated, there exuded, on raising the womb, and particularly on compressing it between the two hands, a great quantity of blood, somewhat pale and mixed with small clots. Manual exploration of the external surface of the uterus, combined with the examination of the internal surface by means of the hysterometer, did not display the presence of any fibroid tumor, as was supposed.

The message was difficult on account of the position of the uterus and the sensitiveness of the integument of the abdomen. In the beginning, every séance was followed by an abundant loss of blood. After six weeks marked amelioration took place; the metrorrhagiæ were less profuse. Her strength returned, and she could walk better. The treatment was continued irregularly. The patient at times absented herself from two to three weeks, and then the amelioration did not progress regularly either. From time to time she suffered losses of blood, but they were less abundant than formerly. After ten weeks she considered herself quite cured and regarded the last loss of blood as the regular and normal discharge of the menstrual period. After only four weeks' treatment by massage the above mentioned tumefaction disappeared.

I heard that ten months after the treatment all went well. The patient was always pale, but toward the end she felt pretty well. She did not suffer from any metrorrhagia since the end of the treatment. Menstruation occurred at regular intervals, only the last two were behind time. She then became pregnant. Pregnancy terminated by normal delivery without an unusual loss of blood. I heard from this patient, more than two years afterward, that she had been well during all that time.

As we have seen, the pathology of uterine hæmorrhages has received an entirely new aspect through the recent discoveries of Theilhaber and Lorenz. In leucorrhœa the same pathological conditions are found in the endometrium and mesometrium. Most cases of uterine hæmorrhages reported by Theilhaber showed a simultaneous chronic catarrh.

I have treated, with good results, several cases of leucorrhœa, which is, as is well known, one of the most frequent manifestations of chronic metritis (endometritis)⁴, and which is, moreover, the one

that the patients most frequently desire to get rid of. I must confess that this affection is often one of the most difficult and obstinate to cure, and, if cured,—which is the rule—is generally the last one to disappear. This is probably due to the fact that the endometrium can only be influenced through the thickness of the uterine wall, and it appears to me that massage particularly produces its good effects here in cases where the uterine wall is more or less softened, a condition which is fortunately not the rule.

Leucorrhœa is particularly obstinate in cervical catarrh, where the discharge is mucoid, tenacious, sticky and more or less transparent. This secretion as a rule changes its character before it disappears, and becomes thicker and whiter. This I have often observed in my practice.⁵ Within the last few years curettage is done not only in hæmorrhagic endometritis, but also daily in chronic endometritis, i. e., uterine catarrh. Theilhaber has not to my knowledge undertaken any experiments in order to demonstrate the influence of curettage in cases of leucorrhœa, but concludes from the slight anatomical changes of the mucous glands—if there were any—that the results of curettage in leucorrhœa ought to have been about the same as after uterine hæmorrhages. Theilhaber found only the glands increased in number in all cases reported in his article; in only one, however, were the individual glands elongated and dilated.

Even leaving entirely aside these investigations I wonder how a procedure like this can have any influence on the inflammation of the uterine parenchyma, which always coexists to a greater or less degree with the endometritis. It appears to me as if, when the mucous membrane is regenerated and the connection between the endometrium and the parenchyma reestablished, the previous morbid symptoms would easily return, since they have the same blood, lymphatic, and nerve supply. This is just what frequently happens, and I attribute to this the frequent relapses. I have seen one, two and even three or more relapses follow curettage done by some most skillful gynæcologists.

Besides, to pretend to cure cervical catarrh by curettage seems to me to be an illusion which the most primitive anatomical knowledge will be sufficient to destroy. While the follicles of the mucous membrane of the body are very simple in their structure, dichotomously ramifying, if at all only

influenced by massage. These are leucorrhœa, hæmorrhages (just spoken of), sterility, bladder irritations, constipation, and some forms of dysmenorrhœa. In speaking shortly of these it seems to me that the matter is all the more interesting as the exposure of every one of them is followed by some observation referring to them.

⁵ Last winter (1904-1905) a former patient came to me for treatment. Ever since the birth of her first child, five years ago, she complained of severe pains in the small of her back and in both flanks, the former being much aggravated during the menstrual period. She also complained of marked bearing down pains and of an abundant leucorrhœal discharge, particularly before the onset of the menses. This had all characteristics of one originating from the cervical canal. It was sticky, transparent and resembled closely the white of an egg. After a fortnight of treatment it began to change character. It became opaque, white, thicker, less tenacious, and disappeared entirely at the end of the sixth week (treatment lasted two months), returning only in slight form a few days before the menstruation that followed the cessation of the treatment. At the moment of correcting the proof of this article the discharge has not come back, and the patient is entirely relieved of all her symptoms. Two years ago I treated a similar but less severe condition in a multipara. Her chief complaint was that of a disagreeable pressure sensitive on the rectum, causing considerable mental depression and hysterical symptoms. After seven weeks of treatment by massage the discharge ceased entirely and the patient felt perfectly well. She continues doing satisfactorily at the moment of this publication.

⁴ I cannot help briefly alluding in this article to some symptoms of chronic metritis in the uterus itself or its neighboring organs, which are all the more important as they are favorably

in the depths, and ending where the underlying muscular tissue begins, not penetrating into it, the glandular apparatus of the cervix is more complicated, having the shape of racemose glands, penetrating sometimes deeply into the thickness of the muscular tissue. Although Dr. Doléris, in the book mentioned⁶, appears to be in favor of curettage as far as it is employed in cases of catarrh of the uterine body*, he is not convinced of its utility when dealing with cervical catarrh. "To reach, with the curette," he says, "the diverticula of the uterine neck, and the follicles, where the morbid process is lodged and persists in preference, is something quite impossible. The curettage cannot cure the cervical metritis."

As, in addition, any complication of the appendages constitutes a contraindication to the application of curettage, and as these complications are very frequent, it is easy to understand that the number of cases susceptible to this method must be rather limited.

CASE II.—Mrs. N., 28 years of age. She has been confined four times. Her ailment began at her last confinement, in March, 1875, and she attributed all her symptoms to this. Her weakness increased gradually to such an extent that after the slightest effort she was obliged to rest several times during the day. So far she has used vaginal injections of tannin solution and direct applications of silver nitrate. These procedures, together with hydrotherapy, produced but transitory diminution of the quite abundant leucorrhœa she complained of.

When I examined the patient for the first time, in December, 1876, in the clinic of Dr. Pacquelin, I found the uterus increased in size, without any displacement, length 7.50 cm.; freely movable and of rather soft consistency. The cervix was large, slightly lacerated on the left; "Emmett's operation" was indicated, but not practicable. There was also a superficial ulceration in the posterior lip extending even into the cervical canal.

During the first séance of massage, on account of the manipulations, a quantity of fluid which had apparently accumulated in the uterus was observed to flow from the uterus. It was of mucopurulent quality. The leucorrhœa was very profuse. The amount of discharge diminished gradually, and at the end of seven weeks it was quite insignificant. The patient considered herself cured. She had gained strength so that she was able to attend to her household. Pains were absent. Her general condition had also improved. The uterus had diminished in size, being now of normal length and consistency. The ulceration disappeared without local treatment. At the following menstrual period she had a slight leucorrhœal discharge at the end of it. For three weeks she was not feeling quite so well. All this disappeared after several séances of massage.

I saw this patient ten months later. She informed me that the leucorrhœal discharge had entirely stopped since her first menstruation following the treatment.

Sterility.—Sterility is not an uncommon symptom in chronic affections of the uterus. According to the statistics of Grünewaldt, out of the fifty-six women affected with chronic metritis he found it present in 46.4 per cent. of the cases. There are many causes of sterility. Before discussing the treatment of sterility by massage, we must exclude the congenital variety, which is not amendable to

treatment, and therefore we have only to discuss the acquired form. Sterility results if any of the genital organs are incapable of performing their functions. It is not in itself a disease, but only a symptom of different diseases of the generative organs.

The most frequent cause of sterility is chronic metritis, especially the accompanying endometritis. This alone interests here. The following causes of sterility have been much spoken of: (1) Hypersecretion of the mucous membrane, causing occlusion of the cervical canal with a mucous plug which prevents the entrance of the spermatozoa. (2) Acid and fœtid secretion which inhibits their action on the ovum. (3) Marked atresia of the cervix, which constitutes a mechanical obstacle.

The first cause needs no explanation. It can readily be imagined that a mucous plug temporarily prevents conception, but it will not be permanent. I only speak of sterility in those women who are in the active sexual period of life and desire children, when at least three years have elapsed since their last confinement.

The influence of the character of the secretions has not been well investigated. Conception has occurred when cancer of the uterus with fœtid discharge was present. Such a discharge ought to be more harmful to spermatozoa than a common catarrhal secretion. There remains for discussion in this connection now only atresia of the cervix. Owing to the influence of Sims's ideas, the importance attached to this has been exaggerated. Many facts contributed to this error. Discussion of the cervix caused some of the symptoms complained of to disappear, and made the patient fertile. In the great majority of these cases, atresia has been the result of cauterization. You encounter a vicious circle which is met with at every step, in discussing uterine pathology. The mucopurulent secretion is very abundant, fills the cavity, distends the walls, and increases the venous stasis. The more catarrhal secretion there is, the more pronounced this symptom. The secretion in the uterine canal increases each day, distends the walls and makes them proportionately thinner. When an outlet for drainage is made, some of these factors disappear and the local bleeding caused by the operation likewise diminishes the passive congestion, at least for some time. It is in this manner that incision of the cervix can be efficacious in the treatment of acquired sterility, the same as in dysmenorrhœa—although here only very transitorially. But about this later.

Lott has shown, many years ago, that the spermatozoa leave the vagina by reason of their own mobility. Cases have been described in which fecundation occurred in spite of obstacles more serious than atresia of the cervix. A patient of Scanzoni, who had a polyp protruding from the cervix, became pregnant seven times. All her pregnancies terminated in abortion. The inflammation and metrorrhagia were the cause of the abortions. The same author cites a case of irreducible antiversio with hypertrophy of the entire uterus and elongation of the vaginal portion of the cervix into which he was unable to introduce a fine sound. This malposition was accompanied by marked dysmenorrhœa. The patient became pregnant ten

⁶ *Métrites, et fausses métrites*, Paris, 1902, 588 pages.

*At the time Dr. Doléris wrote his work, he did not, of course, know anything of the discoveries of Theilhaber.

years after marriage, and her pregnancy went to full term. The author saw this patient subsequently, and her malposition had not changed.⁷ It is impossible to suppose that the displacement was the cause of the continued sterility. Under the influence of treatment her general condition improved, the uterine mucosa became modified and conception became possible.

I do not believe that displacements, changes in shape, and atresia are insurmountable obstacles to impregnation. If the orifice is sufficiently large for the passage of the menstrual blood, the spermatozoa can also enter the uterus.

Does the fecundated ovum develop? Does pregnancy go to full term? That is another question. Scanzoni's patient who became pregnant seven times had seven miscarriages. These were caused not so much by the presence of the polyp as by the accompanying metritis (endometritis). Whatever the location may be, it terminates by bringing about structural changes in the mucous membrane. Fixation and development of the ovum are impossible. The catarrhal secretion and the metrorrhagia render its expulsion easy.

"We must admit," says Grünewaldt, in a work on sterility, "that the inflammatory process does exert a deleterious influence upon the ability of the ovum to become fixed, and as we recall our clinical experiences we must believe that this occurs before complete atrophy of the mucosa takes place. The elements of the inflamed mucosa act with reference to the ovum as if they were already atrophied."⁸ I share entirely this opinion. If now we review what we have so far observed, we shall find that sterility is very often due to chronic inflammation of the uterus. The secondary or concomitant symptoms, such as displacements, changes in shape, and atresia, are insufficient to cause it. It is due to structural changes resulting from passive congestion, which prevent fixation and development of the ovum. Its expulsion before term is favored by excessive secretion and metrorrhagia.

Massage is indicated and is successful in such cases, which may be inferred by referring to the cases in which leucorrhœa and sterility were the only symptoms. My cases include a large number of patients in whom conception had appeared to be impossible for more than three years. Several became pregnant and went the full term. What is more, some became pregnant within three months after the treatment had been stopped, several even before the treatment was finished. Professor Asp in Helsingfors had similar experiences. He applied massage to a young and emaciated woman who had been sick two years and had aborted several times. She became pregnant during the course of the treatment, went to the full term, and was delivered of a healthy living girl. The same author mentions other similar cases.

CASE III.—Mrs. M., 26 years of age, had a miscarriage in the second month of pregnancy. She became again pregnant in February, 1871, when the pregnancy terminated at the full term. She was not pregnant during the next six years. Since her last confinement she

suffered from pronounced pains. She has always suffered from leucorrhœa ever since she began to menstruate; but lately this symptom had markedly increased, at the same time the discharge had become thicker.

Her general appearance was satisfactory. She had had no other treatment except vaginal injections of alum solution and vaginal tampons of various medications. She came to the St. Louis Hospital clinic in Paris in February, 1877. The uterus was found in a normal position, but softer and also larger than normally. On account of the flabbiness of the abdominal walls, massage was easy. As a result of this treatment the pains diminished at the menstrual periods and during their interval; leucorrhœa diminished; she only complained of a slight whitish discharge before the last flow. At the end of a few weeks, the patient considered herself well enough to interrupt the treatment. I saw her again in the middle of 1878. Since she was massaged, menstruation, formerly irregular, became regular. For the last three months she had not menstruated. She experienced the same symptoms as she did with her former pregnancy. From later advices I was informed that her pregnancy took a natural course and went to full term. She gave birth to a healthy girl. I have not heard from this patient since.

Irritations of the bladder are very common in cases of chronic metritis, whether complicated with retroflexion (version) or antelexion (version) or not.

I am surprised to see how many gynecologists and still more general practitioners adhere to the old theory that these affections are due to a mechanical cause arising from the malposition (flexion), from the tension of the bladder or pressure upon the cervix on the part of the retroflected uterus, while in case of antelexion they believe that the vesical tenesmus depends upon the pressure of the fundus on the bladder, all the more when the angle of flexion is very acute and consequently the fundus, pressing more forward and downward, prevents the bladder from expanding normally, the bowels increasing this pressure.

He who applies massage in the treatment for diseases of women will be able more than any one else to demonstrate how erroneous this theory is and show that the real cause of the irritation is due to the inflammatory state of the uterus and its surroundings. How many cases of vesical tenesmus due to this cause have not been cured because the original affection was not revealed.

Here is the proper place, I think, to speak of a symptom frequently present in chronic metritis as well as in other pelvic diseases, namely, constipation, especially as the sufferers from this most annoying symptom are often relieved by gynecological massage. I have frequently discussed its etiology in my works on affections of the female genital organs. It has been asserted that it is due to mechanical difficulties. The uterus drawn backward compresses the wall of the rectum, diminishing its lumen, and when once fixed in this position the stenosis, formerly only temporary, becomes permanent. On the other hand, some patients whose uteri are in normal positions or in antelexion or anteversion, suffer from obstinate constipation. It cannot then be due to the compression and of mechanical origin. Other cases whose uteri are in positions of typical retroflexion, where the rectum is compressed, have regular

⁷ M. Sims's *Lehre von den Ursachen und der Behandlung der Sterilität. Beiträge zur Geburtshilfe und der Gynäkologie*, IX, first part, 1870, p. 109, et seq.

⁸ Ueber die Sterilität. *Archiv für Gynäkologie*, VIII, 1875.

movements in spite of the stenosis. Only one conclusion can be drawn from this. Too much stress has been placed upon mechanical causes.

Constipation, complicating a chronic metritis, with or without deviations of the uterus, or adhesions of whatever direction, is due to atony of the muscular fibres of the rectum. This explanation applies better to uterorectal adhesions than to any others. It is not even necessary in these cases to speak of such symptoms. The inflammatory process has given rise to adhesions, and perhaps has evaded the wall of the rectum and caused an infiltration, which diminishes the contractile power. There are two varieties of constipation in pelvic affections; the one, reflex, may be observed even where the wall of the rectum is not involved; the other when there is inflammatory infiltration of the rectal wall and a partial degeneration of its contractile elements. If it is true that the results obtained by treatment indicate their real causes, then our hypothesis is confirmed. Constipation is frequently completely, sometimes rapidly, relieved by massage of the genital organs alone; this sometimes occurs so quickly as to surprise the patients. Now, when we have to deal with a parenchymatous metritis, or a parametritis, with adhesions on either side but not posteriorly, or a perimetritis with adhesions in front or in the cavity of the pelvis, we never touch the rectum. There is no reason to suppose that because we have relieved the infiltration we have caused the disappearance of the stenosis, when the bowels move regularly. The bowels also become regular in unfavorable cases, as mentioned above; that is, in uterorectal adhesions. This subjective improvement alone, which is certain to follow, is sufficient to justify the employment of massage in such cases.

I would regard this article incomplete if I did not say a word about the changes in shape and the malpositions of the uterus, so much the more as I believe that massage treatment more than any other treatment is able to decide the question and reveal what really gives rise to the symptoms, the malposition of the uterus, or its complicating chronic inflammations. I claim that massage is the only therapeutical measure capable of favorably influencing what I regard as the chief part of chronic metritis, namely, the affected parenchyma of the uterus.

I do not know whether the term cure can be applied to versions and flexions. The patients no longer have hypogastric pains or dysmenorrhœa. A number who had been sterile many years became pregnant. Yet in saying that they had been cured I am not exaggerating. However, if the pathological conditions are considered, they cannot be regarded as cured. The flexions or versions, after the treatment, remained as before. I had thought at times that I had obtained some improvement. Repeated examinations, however, convinced me that I was mistaken. I do not believe that simultaneous massage of the uterus and the broad and uterosacral ligaments, as recommended by Brandt and some others, would have yielded better results. I had likewise resorted to this latter method, but without success, among others in a case of retroversion, where I thought

I had obtained a complete cure. The uterus remained in its normal position for a fortnight. As soon as I stopped the treatment the retroversion recurred owing to the pressure of the intestines. In several others the results were the same. I saw these patients several months later. The displacement was unchanged. When the uterus has been retroverted but a short time after childbirth, a permanent relief may be obtained after three or four weeks' treatment. At this time it is possible to act upon the uterosacral ligaments and by uterine massage hasten the delayed involution.

I have not been more successful in flexions, in spite of my following Brandt's procedure very closely. In anteflexions⁹ I have at times thought I obtained some amelioration in the condition by directing the treatment to the uterine parenchyma, but the result was of short duration, just as in the versions, and the uterus was soon just as much anteflexed as before. Now when I have to deal with a flexion or a version, I disregard these conditions, for I am convinced that these alone are unable to give any symptoms, not even constipation, when the fundus exerts pressure on the rectum.

Josephson calls attention to the frequent occurrence of uterine retroflexion due to the pressure of ovarian tumors where absolutely no symptoms on the part of the uterus are present.¹⁰ Professor Salin of Stockholm, in an article in *Hygiea*, 1904, claims that he never observed any symptom complex of importance to suddenly disappear after reposition of the uterus; the patient complained of the same symptoms, whether the uterus was resting in the pessary in anteflexion or in retroflexion. In not a few cases the uterus occupied an alternating position—at one time anteflexion, at another time retroflexion—and yet he never noticed that the malposition of the uterus had any effect upon the state of health of the patient. He also observed that patients who had worn a pessary on account of retroflexion, but who had it for some reason or other removed, returned complaining of their former ailments, and still the uterus was in a position of anteflexion. Moreover, patients declared themselves healthy and free from former symptoms, although the uterus remained in retroflexion.

The Norwegian gynecologist, Dr. Vedeler, who has more than anybody else devoted much time to solve this question, has examined the uteri, diseased or not, of not less than 7,200 women, expresses himself in conclusion of his article as follows: "The pains are not due to the position of the uterus. An operation which would only confine itself to the correction of the position of the uterus would then be absolutely unjustified." (*Nord. Med. Arkiv*, surgical part XXXVI, 4).

If the versions and flexions do have any influence on the metritis, that influence is only produced when they increase venous stasis. And yet this influence is unimportant. There is, however, an unusual unanimity of opinion among physicians regarding the importance of these conditions. General practitioners, specialists, patients, everybody, is interested in them. As soon as a version or flexion is discovered, it is thought necessary to

⁹ It was at the time when I regarded anteflexion as a pathological affection.

¹⁰ *Larobok i Gynecologi*, Stockholm, 1901.

rectify and maintain it in its proper position. All kinds of pessaries have been employed, among which that of Hodge appears most in vogue. Next to this comes the abdominal binder. I do not believe that any pessary is capable of affecting an anteversion or retroversion, unless it be for a short time. However, the problem is a simple mechanical one. What is required to restore the uterus to its normal position and retain it there? A fixed point of support and sufficient power to overcome the causes which tend to displace the uterus. Not one of these conditions is fulfilled by the pessary. The pessary is only held by the vaginal muscles, whose tonicity is gradually diminished when it becomes necessary to use larger pessaries. The organs of this region are continually subjected to displacements on account of the change in volume of bladder and rectum, walking, etc. Besides the point of fixation is very uncertain. Abdominal binders are not much better. They simply press the intestinal coils up toward the epigastrium. In spite of all this, however, patients maintain they are better after the application, or at least have enjoyed some relief. We have no reason to doubt this. The patients desire improvement, and if any occurs we may attribute it to the partial immobilization of the uterus. The latter is inflamed and movable, and every movement the patient makes causes pain, and rest relieves it.

In this way gynecologists have explained the relief obtained by the binders, even going so far as to claim immediate relief after the application of a pessary. As for myself, I have very seldom had this success. Suggestion plays, in my opinion, here, as it often does in medicine, a very prominent part, and I may not be in possession of the same suggestive power as so many others. We frequently note that these wonderful results are of but short duration. The ideal results obtained by Alexander Adams' operation are far from being so in regard to the symptoms of retroflexion. (Krönig and Feuchtwanger, *Monatschrift für Geburtshilfe und Gynäkologie*, X und XI, 1900), as the conditions of the simultaneous chronic inflammation of the uterus have only in a small degree or not at all been improved by the reposition of the uterus into its normal position, thanks to the improved condition of the venous circulation.

In the great majority of cases, I maintain and repeat that flexions and versions do not produce any symptoms. The morbid symptoms that accompany them are due to the metritis (endometritis). This is proved by their complete disappearance when the metritis is relieved. I recommend massage because this cures the latter, and the patients no longer have symptoms referable to the displacements.

122 EAST 34TH STREET.

FACTS FROM CORONER'S CASES.

By PHILIP FRANCIS O'HANLON, M. D.,

NEW YORK.

Strange facts always awaken the interest of most human beings from the nursery to the halls of learning. A man, G. B., was taken to the House of Relief by its ambulance in a state of collapse following three days of gastric disturbance of which constant

vomiting was the most predominant symptom. He died. The autopsy revealed a lump or tumor in the small intestine two feet from the ileocecal valve. It was movable. That part of the intestine from the point of tumor to the valve was collapsed, behind the intestinal tube was markedly dilated. Opening the intestine the tumor was seen, its form oval and as large as a goose egg. It had the appearance of fat. It was not decided at the autopsy what it consisted of. One half of the substance was sent to Dr. Roper, of the New York Hospital Laboratory, and the remaining to Dr. Hodenpyl, of the College of Physicians and Surgeons.

After a time these gentlemen made the report that the tumor was a peach. The statement was made after making sections and microscopical examinations, and comparing with fruit of the above named kind.

How or in what manner the deceased was able to do this trick which ended his career remains, after most diligent enquiry on my part, a mystery, but a most truthful and interesting fact.

A minister of the Methodist church came to New York from Connecticut to see Dr. Janeway, who in turn sent him to Dr. John Vanderpoel, who washed out the bladder of the patient. After the washing the patient in putting on his overcoat said in a startled but not loud tone of voice, "What's that?" and fell to the floor and died.

The autopsy showed a complete rupture of the left ventricle of the heart. There was occlusion of the coronary arteries, with marked general arterosclerosis and thickening of the cardiac valves.

Mrs. McC. went into a butcher shop in New York on the 24th of December, on Tenth Avenue. Whilst waiting she fell dead in the store. The autopsy showed a large amount of clotted blood in the pericardial sac and a rupture of the right ventricle of the heart.

In seeking a history of these cases, no information of symptoms referable to cardiac disease was obtainable.

A little child three years and three months old was taken with an attack of coughing and gagging. The mother by advice of neighbors gave the child a dose of castor oil. The child promptly died. The neighbors said the oil must have caused the child's death and hence the coroner was notified. The autopsy showed a gum drop firmly lodged in the larynx of the deceased. The oil and the druggist were not blamed after the findings.

121 WEST NINETY-FIFTH STREET.

Dengue.—In its occurrence in wide epidemics, its rapid diffusion, the large proportion of the population attacked, and very closely in its symptoms, and their comparatively short duration in most cases, dengue closely resembles influenza. The usually sudden, sometimes instantaneous onset, the severe headache, backache, and limb pains, the pyrexial symptoms, and many of the complications and sequelæ are common to both. The rash of dengue, which is, however, not a constant symptom, is sufficiently distinctive; but of even more importance is the almost invariable absence of catarrhal symptoms of the respiratory tract, and the extreme rarity of pulmonary complications. The initial symptoms of yellow fever closely resemble those of dengue as far as the stage of remission.—*The Australasian Medical Gazette*.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at frequent intervals. So far as they have been decided upon, the further questions are as follows:

XLVI.—How do you treat a sprained ankle? (Answers due not later than January 15, 1906.)

XLVII.—How do you treat whooping cough? (Answers due not later than February 15, 1906.)

XLVIII.—How do you treat pruritus ani? (Answers due not later than March 15, 1906.)

Whoever answers one of these questions in the manner most satisfactory to the editors and their advisors will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but not REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLV has been awarded to Dr. William Warren Potter, of Buffalo, whose article appeared on page 139.

PRIZE QUESTION NO. XLV.

INTERSTATE RECIPROCITY IN LICENSING.

(Continued from page 142.)

Dr. R. M. Slaughter, of Charlottesville, Va., says:

No question probably has occupied the attention of medical examining boards in the past few years more than this. While theoretically its solution may seem easy enough, practically it has so far proven insolvable. Those who have never had to deal with this question in its practical aspects, and who are inclined to blame the boards because reciprocity has not been accomplished to a greater extent, little realize the difficulties to be overcome and the obstacles to be removed in its accomplishment.

Let us in the first place briefly summarize the principle obstacles to be removed before the question can be solved, as follows:

(1.) The acts of the various States creating medical examining boards lack that uniformity which would admit of a general interstate reciprocity. Some instances of this lack of uniformity may well be cited. The laws of most States allow reciprocity, while those of others, as, for instance, North Carolina, do not. Other States, again, such, for example, as Arkansas, license nongraduates, making impossible reciprocity with those States in which a diploma is a prerequisite to examination. These are some of the nonuniformities in the State laws, which nonuniformities constitute the chief obstacle to interstate reciprocity, and which must be removed before it can possibly be accomplished.

(2.) The requirements as to preliminary education are also nonuniform in the various States.

(3.) The standard of examination requirements of the different States vary more or less. Both of

these varieties of nonuniformity must be done away with.

(4.) The exemption from examination of any persons by special legislation, or otherwise, is another obstacle. This, if possible, should be done away with in every State, as it is an obnoxious form of class legislation and absolutely unjust to those who have to take the examination. In Virginia, I am glad to be able to say that it is prohibited by the State constitution.

Such then are the chief, and the more important of the minor obstacles to general interstate reciprocity. Are they insurmountable? I would answer, no. How then may they be overcome? The plan I have to suggest seems to me to be practical and possible, and worthy of trial. It is, however, one that will require time, patience, tact, skill and funds, for with the requisite machinery for its accomplishment put in motion, and kept in motion, it will certainly require several years to accomplish the desired end. It will require, moreover, the concerted action of the boards and State societies of all the States, or, at least, a very large majority of them.

The first step in the plan I have to suggest is the establishment of a conference of the State boards of every State which has a medical practice act. In this conference every board should be represented by one or more members who shall have full authority to act for their respective boards. It goes without saying that the men selected as representatives should be men of experience, tact, and good judgment. Moreover, the boards must pledge themselves to abide by the actions of the conference.

In this conference the first step should be the agreement upon a uniform law drafted by experts. This being done, the proposed act should be placed in the hands of the legislative committee of each board. This committee should act in conjunction with the legislative committee of its State society, and should have the earnest support of that society. These committees should then bring the proposed act before their State legislature, and urge the work for its adoption as a law. Should one attempt fail, let another be made, and still another until the effort is successful. The medical profession of each State can help greatly, too, in the matter, for it can wield a wonderful influence in politics, if it will only work unitedly and persistently.

But it will be asked, where are the funds necessary for the holding of the conference and other expenses to come from? I have little doubt that the State societies would bear the expense, or at least a large part of it, and some could be raised by contribution.

The conference should also fix upon a minimum standard of preliminary educational requirements, and of examination requirements, which must be binding on all boards. The conference should in addition settle all minor questions which might arise.

Such, then, is the plan I would suggest, and in this way, and this way only, it seems to me, can interstate reciprocity become an established fact within any reasonable length of time.

Dr. Hugh T. Nelson, of Charlottesville, Va., remarks:

Having been a member and an organizer of the first board in a State which was one of the pioneers

in the improvement of the status of the medical profession through the medium of boards of medical examiners, I feel that I might with propriety enter into the discussion of the above subject.

The fight of our State medical society with our State legislature was long and bitter, but resulted in a fair "Medical Bill," which has since 1884—the year of the birth of our State board—been modified in many particulars, many, doubtless, for the better.

Having been first secretary and later president of this board, and having taken a great deal of interest in and done a large amount of work for it, I felt very averse to resigning my position therein for the sake of and by reason of relation with one of our State medical schools.

Believing, however, then as I do now, that the teaching and licensing bodies of the medical profession should be entirely separate, my belief is the keynote of my song. The accomplishment of interstate reciprocity is at best a doubtful question. And why?

Under our State law, the board cannot recognize a diploma as the ground of granting its certificate, though now the diploma has to be considered; yet this board is asked to recognize the certificate of another State board as the sole ground upon which to grant its certificate entailing permission to engage in practice. In other words the board of medical examiners of this State is asked to accord to other licensing bodies the privilege of granting certificates to practise medicine and surgery in our State, denying the same privilege to the diplomas of the medical schools of our State which are under their own immediate observation, and whose methods of instruction are watched and very well understood.

Unfortunately these licensing bodies are often controlled by political influences in which the different teaching bodies (medical colleges) are more or less influential. Hence the certificate of a medical examining board may or may not carry with it evidence of professional ability.

This should be made the fundamental principle of every certificate carrying with it permission to practise medicine, etc. There can be no earthly doubt that from an educational standpoint a medical diploma is worth much more to-day than it was as far back as 20 years ago. Diploma mills have been compelled to take in their horns to a great extent, and the first class medical schools are much more at the front.

As a principle then upon which to base reciprocity, I would say that such a thing should not be thought of outside of representation by State boards in such a convention of representatives of State boards in some such convention held at the call of, say, five State boards of medical examiners.

Boards not desiring representation in such convention should be given to understand that they are without the pale of hoped for reciprocity. Such a convention once called and having met could easily settle upon the terms of representation by the individual boards, and this formally agreed upon, this medical legislature, as it might be called, composed of representatives from the different State boards, could easily settle the details for its future government, and arrange for reciprocal exchange of license on a basis acceptable to all parties concerned.

Some medical boards recognize a college diploma as the only prerequisite for issuing a permit to be registered as a practitioner; other boards examine all applicants, putting each one through a more or less rigid examination, written, oral, or both.

Now it is evidently prejudicial to the teaching interest for a State board accepting diplomas as its only standard, to have its certificates accepted by another board requiring examination of every applicant whether presenting a diploma from the college of its own or of some other State.

Such a representative body, composed of members of all State Boards desiring reciprocity, could easily form a code to govern their actions, for instance:

(1.) State, upon evidence, from what schools diplomas should be accepted as the sole prerequisite for license except certificates as to exemplary morality.

(2.) Parties applying for license with diplomas other than those of institutions recognized by this legislature must stand examination by the board of the State in which they apply for permission to practice.

(3.) Parties desiring to practise in any State shall be allowed to do so upon presenting the certificate of any State board that is represented in the legislature constituted as aforesaid.

(4.) All boards embraced in this association of State boards are to require, when examination becomes necessary, every applicant to pass satisfactorily a written examination upon all the usual branches; and the questions and answers of such examinations shall be kept for a reasonable length of time so as to be capable of being inspected by the legislature or a committee thereof, at such time and place, and in such manner as may be provided.

(5.) This legislature should meet at least once every year, and the proper officer of each State board should bring to such meeting the passed written examinations.

Under some such condition as the foregoing it appears that the certificate of any one board in the association might be accepted by any other board belonging thereto, and the trouble and worry of examination of applicants be entirely avoided after the lapse of a few years.

As said very little actual examination would have to be done, and the difficulty of transporting papers or of inspecting them, if this should ever be desired, would be reduced to a minimum.

In admitting to the list of medical schools those whose diplomas are to be accepted by all boards ingrossed in the association, it is to be considered that not simply so many sessions or years of medical work is taken into account.

Four years is now the required time of study at almost all the medical schools in the country—a four years' course.

But it must be considered how varied is the actual number of months or weeks actually devoted to work in the different schools professing a curriculum running over a period of four years. Many, in fact a majority, of the medical schools do not devote as much as five months to actual work in any one of the four years; even less time than this being given to work in the night medical schools so extensively patronized in the large cities.

On the other hand some of the leading schools

consume as much as eight and nine months in each year, and subject their students to rigid examination before permitting them to come up for their diplomas.

These points, however, are matters of detail, which, though important, must of necessity be left to the legislative body representing the association of medical examining boards of the country.

Somehow thus it appears that interstate reciprocity in licensing would be best accomplished.

(To be continued.)

Correspondence.

LETTER FROM LONDON.

The Bradshaw Lecture—The Mystery of a Royal Heart—The Accoucheur of the Mother of Emperor William II.

LONDON, January 6, 1906.

Mr. Henry Trentham Butlin is one of our foremost surgeons, and for many years has been regarded as one of our leading authorities on cancer. Unlike many surgeons, he has given much attention to pathology, especially to that of malignant disease. He is a man of an acutely critical turn of mind and of a soundness of judgment which gives special weight to his opinions. Hence the fact that he was to give the Bradshaw Lecture (which, by the terms of its foundation must deal with cancer) at the College of Surgeons this year, excited keen interest in the profession, which naturally looked forward to a deliverance of unusual importance. For the contents of the lecture see *New York Medical Journal*, January 6th, p. 52.

Napoleon's heart is said to have served as a funeral baked meat to a select party of rats. Another heart, alleged to be that of Louis XVII of France, the poor boy who was done to death by brutal jailers in the Temple, has been carefully preserved, and at various times offered as a sacred relic to Legitimist pretenders. For some reason, however, they have always fought shy of it. The heart of Gambetta, who was a sovereign of the people, was taken possession of by an admirer at the post mortem examination of his body, and after a variegated course of adventures is now enshrined in a crystal casket which is in the hands of a private person in France.

But surely the oddest fate of a royal heart is that which, according to Mr. Henry Labouchère, befell the heart of Louis XIV, the Sun King of France. The story was told to Mr. Labouchère by the late Colonel Harcourt, and was confirmed by his brother, Sir William Vernon Harcourt, the statesman. The Harcourt who lived during the first French Revolution had many connections in France, and invited a good many of the émigrés to visit him. Among them was a canon of St. Denis. On leaving the canon expressed the thanks of himself and of other Frenchmen for the kindly hospitality of their host, and produced from his pocket something that looked like a piece of dried leather, an inch or so long, which he presented to him. "I was," he said, "in the cathedral when the royal tombs were broken open and the contents scattered to the winds. This is the heart of Louis XIV. It was kept in a separate receptacle, and I managed to get away with it." The heart, which thus came into the possession of the Harcourt family, was occasionally produced

as a curiosity of special interest for the delectation of visitors. The late Dr. Buckland, dean of Westminster, was on a visit to the seat of the Harcourts, at Nuneham, when it was brought out for his inspection. He was then very old. The dean was one of our early geologists and palæontologists, and the scientific spirit moved him to wet his finger, rub it on the heart, and put the finger to his mouth. After that, before he could be stopped, he put the heart in his mouth and swallowed it, whether by accident or design will never be known. Very shortly afterward he died and was buried in Westminster Abbey. Consequently, says "Labby," the heart of Louis XIV must now be reposing in Westminster Abbey, inclosed in the body of an English dean. If this story is true, the heart of the Grand Monarque, after being "knav'd" (as Sir Thomas Browne would have said) out of its grave at Saint-Denis and again stolen from a later place of repose, underwent a transmigration more curious than that of "Imperial Cæsar dead and turn'd to clay," and entombed in the body of an Anglican dean, at last found a resting place among the old Kings of England. Unfortunately for the truth of part of this strange, eventful history, Dean Buckland was not buried at Westminster, but at Islip. On the other hand, it is well known that Buckland's scientific curiosity manifested itself in odd ways. Like Mark Antony, he would eat strange food, and he was in the habit of asking his friends to breakfast with him on such unusual fare as crocodiles, snakes, mice, and the like. The late Dr. George Harley, a London physician who was an authority on the liver some twenty years ago, was fond of similar experiments in diet, and his guests were never quite sure what strange beast they might be eating. Some confirmation of the main part of the story about Buckland is afforded by Augustus Hare, who, in the fifth volume of *The Story of My Life*, writes as follows: "Talk of strange relics led to mention of the heart of a French king preserved at Nuneham in a silver casket. Dr. Buckland, while looking at it, exclaimed: 'I have eaten many strange things, but have never eaten the heart of a king before,' and before any one could hinder him he had gobbled it up, and the precious relic was lost forever. Dr. Buckland used to say that he had eaten his way straight through the whole animal creation, and that the worst thing was a mole, that was utterly horrible." To this passage is appended the following footnote: "Dr. Buckland afterward told Lady Lyndhurst that 'there was one thing even worse than a mole, and that was a blue bottle fly.'"

The mention of kings leads me to speak of a curious error which appears in a paper entitled A Study on Brachial Birth Palsy, by Dr. Clark, Dr. Taylor, and Dr. Prout, published in the *American Journal of the Medical Sciences* for October, 1905. As the authors are men of high reputation, and moreover as there is evidence throughout the paper that they have taken special care with their references, they may be glad to have their attention called to the matter. They say, (p. 675): "It is erroneous to suppose that laceration birth palsy occurs only in mismanaged labor. It may easily result in highly skilled hands, as shown by its occurrence at the birth of Emperor William of Germany, on which occasion Sir William Jenner was the accoucheur."

Jenner was a pure physician, and the statement that he had anything to do with midwifery in the days when he was the trusted adviser of British royalty is enough to make him turn in his grave. Besides, Jenner's connection with the court began two or three years after the date of the obstetric accident to which the writers refer. The accoucheur on the occasion was a Dr. Gream, who, though a good doctor and fashionable in his day, has not writ his name large in the annals of medicine. I have always heard from men who professed to know the facts that the German obstetricians were too timid to venture the necessary interference on the person of so illustrious a patient, and that Gream, whom the Crown Princess had insisted on having with her in her hour of travail, had to come to the rescue. The Germans, on the other hand, lay the blame on the British doctor. The incident is said to have laid the foundation of the unpopularity of the subsequent Empress Frederick of Germany. However this may be, it is certain that Sir William Jenner had nothing at all to do with the case.

Therapeutical Notes.

For Earache:

℞ Ichthyol., I part;
Glycerini, 7.50 parts;
Aque destillatæ, 7.50 parts.
M. S.: Instil, three times a day, a few drops of this mixture into the ear.

Dr. Solt, of Mitau, *Bulletin général de thérapeutique*.

For Hyperhidrosis of the Feet.—The following lotion may be applied frequently with much benefit according to J. O. Shoemaker (*Medical Bulletin*, January, 1906):

℞ Magnesii carb., 3ss;
Zinci carb., 3iii;
Liquor calcis, f3iv;
Aque hamamelidis dist., 3ii.
M. Sig.: Shake well and mop over the parts, several times a day.

For Tapeworm in Infants.—After fasting the night previous, give the following, which is of the consistence of jelly and is said to be swallowed very readily by infants as a confection:

℞ Oleoresinæ aspidii, 4 grammes;
Hydrargyri chloridi mitis, 0.40 gramme;
Sacchari, 8 grammes;
Gelatini, q. s.
M. To make a mass of jelly like consistence.

Journal de médecine. (The dose seems large.)

The Solution of Iodine in Chloroform.—M. Chassevant (*Bulletin médical*, January 3rd) recommends in place of the ordinary alcoholic solution of iodine, the use of one in which chloroform is used as a menstruum (10 per cent.). It is free from the local irritation and itching that is produced by the official solution, and is believed to have more penetrating power. The coloration of the skin following this application is violet, instead of the black or brown produced by the ordinary tincture, for which it can be used as an efficient substitute.

Lupus Erythematosus of the Face Cured by Removal of Lymphoma from the Neck.—Delbanco (Aertzlicher Verein in Hamburg, *Deutsche medizinische Wochenschrift*, December 14, 1905) reported a case of a young man who for several

months had shown severe lesions of lupus erythematosus upon both cheeks and ears. After the removal of a large lymphatic gland from the neck, the eruption on the face gradually disappeared. As tubercle bacilli were found in the gland tissue, the tuberculous nature of erythematosus lupus was suggested. The only treatment to the face was daily exposure to the rays of the sun for several months. The general condition of the boy also was greatly improved in this period.

Treatment of Tuberculous Laryngitis.—E. B. Gleason (*Medical Bulletin*, January, 1906) insists that systemic treatment is necessary, and indeed constitutes the principal part in the milder forms of the disease. In ulcerated lesions, the parts should be cleansed with a spray of equal parts of Dobell's solution and hydrogen dioxide, and the following used:

℞ Bismuthi subnitratiss, 3ii;
Acaciæ, grs. xv;
Iodoformi, 3ss;
Morphinæ sulphatis, gr. xx;
Acidi tannici, grs. xxx.

M. Ft. pulvis.: To be insufflated with a powder blower.

If the morphine is objectionable, it can be omitted from the formula.

Excessive pain on swallowing may be relieved by cocainizing the larynx either with the aid of an atomizer, or laryngeal applicator. A lozenge containing cocaine (0.25 to 0.5 grain) may be dissolved in the mouth before meals.

Impetigo of the Face and Scalp in an Infant.—Feulard (*Clinique infantile*) recommends that every evening the head of the infant should be covered with a compress moistened with a solution of resorcin of a strength of 5 parts dissolved in 300 of boiling water, or a starch poultice, and all covered with a waterproof cap. The next day, after cleaning the scalp with water, the following ointment is to be used:

℞ Vaselini, 30 grammes;
Zinci oxidi, 2 grammes;
Acidi boricæ, 2 grammes.

M.

To the eruption on the face frequent applications should be made of boric acid in water, applied on absorbent cotton, followed by the above ointment. In obstinate cases careful applications may be made of the liquor of Van Swieten (mercury bichloride solution, 1 to 1,000, or even stronger), followed by light touching with a mitigated silver nitrate crayon. The infected surfaces should be kept isolated as much as possible, or covered with bandages, so as to prevent autoinoculation by scratching with the finger nails, etc.

Treatment of Acute Conjunctivitis.—M. Morax (*Bulletin de l'Association d'enseignement professionnel*, September, 1905, and *Bulletin général de thérapeutique*) formulates his directions as to the treatment of acute conjunctivitis as follows: (1) Try to dry up the secretion by applying a lotion of boric acid water (4 per cent.), also of plain boiled water (applied hot), or of infusion of chamomile, etc. Warm applications when often repeated have a soothing effect, and prevent the retention of secretion and the maceration of epithelial structures which it produces. (2) Act upon the mu-

cous membrane by bactericidal substances, such as solutions of silver nitrate or zinc sulphate. In the contagious form, the instillation of a one per cent. solution of silver nitrate, once daily, until the secretion is checked, shortens the course of the disease and diminishes the pain. In gonorrhoeal conjunctivitis the only remedy to use is a two per cent. solution of silver nitrate, instilled once or twice daily, and always by the physician himself. In subacute conjunctivitis if a weak zinc sulphate solution be used as a collyrium, for about ten days, it will usually control the inflammation. Finally in diphtheritic conjunctivitis, the prompt injection of antidiphtheritic serum (antitoxine) will remove all gravity from this condition. All annoyance and pain from photophobia may be overcome by the use of smoked glasses (*coquilles de teinte fumée*, No. 3 and 4).

Pathology and Therapy of Yaws.—Dr. Aldo Castellani, in an article entitled *Is Yaws Syphilis?* (*Journal of Tropical Medicine*, January 1, 1906) decides that in spite of analogies, both in lesions and treatment, the disease known also as *frambœsia*, *parangi*, *pian*, etc., is not syphilis. The identity of the two diseases was supported by Jonathan Hutchinson and others, but the clinical symptoms, the geographical distribution, and the histopathology of *frambœsia tropica* show many points of difference from syphilis. The investigations of Dr. Castellani showed that the early lesions contained a spirillum, for which he proposed the name of *Spirochæta pertenius*, or *pallidula*. This spirochæta does not, however, prove that the disease is identical with syphilis. "The leprosy bacillus, the tubercle bacillus, and many other acid fast bacilli are morphologically identical; however, leprosy is not tuberculosis." He believes that the yaws spirochæta will have to be regarded as biologically different from the spirochæta of syphilis. The antisiphilic treatment by large doses of potassium iodide he found to be likewise very efficient in yaws; and much more effective than mercury. Some cases may get well spontaneously; but comparison with the results of the potassium iodide administration shows the great advantage of this treatment. In direct contrast to the above, expressed opinion as to the nonidentity of the two diseases is that of Edward Charles Long, the principal medical officer of Basutoland, Africa, whose annual medical report appears in the same issue of the *Journal of Tropical Medicine*. He says: "The identity of syphilis and so called yaws has been fully discussed in a previous report. As some observers still regard yaws as a separate disease, I would again point out that the experience of medical officers in this country proves that every lesion delineated in fasciculus xiv of the New Sydenham Society's Atlas finds its counterpart in syphilitic natives in Basutoland." The treatment of syphilis is the treatment of yaws.

The External Application of Iodine in Certain Cutaneous Diseases.—Guy C. Kinnaman, of Chicago (*American Journal of Dermatology*, December, 1905), having demonstrated the fact that iodine in watery solution not only possesses very great antimicrobial power, but also is able to penetrate deeply into the skin, used it in certain skin dis-

eases where a parasiticide or an antiseptic was indicated. The formula is as follows:

Iodi crystallini,	2.5 grammes;
Sodii iodid.,	3.5 grammes;
Aquæ destillatæ,	250 c.c.

In some cases this solution was diluted, but it was never made stronger than the above (one per cent.). It was applied, either with a pledget of cotton on a tooth pick, making the application from one to three times a day; or upon a compress (1 to 200 solution for erysipelas) which was left in position for half an hour at a time, twice a day. The applications of the one per cent. solution were continued until localized dermatitis resulted, when their frequency or the strength of the solution was decreased. A mild mercurial ointment was then substituted in some. Favorable results to clinical tests were obtained in *tinea sycosis*, *folliculitis barbæ*, *tinea tonsurans*, *favus*, and *erysipelas*. In another group of cases the value of iodine as a tissue stimulant and promoter of phagocytosis was shown in addition to its antiseptic properties. In the second group were cases of varicose ulcers and specific ulcers. In these compresses of 1 to 200 iodine solution were used for fifteen minutes every second night, followed by dry aseptic gauze dressings, the improvement here was also marked.

Treatment of Pulmonary Tuberculosis by a New Serum.—Alexander Marmorek, in a communication to the Académie de médecine (*Bulletin général de thérapeutique*, December 30, 1905), reviews two years' experience (comprising 40,000 injections) in the clinical application of antituberculous serum, which he now claims to be an established method of treatment. In order to meet the indications in the third stage, that of ulceration of the lung, in which there is a mixed infection with both the streptococcus and the tubercle bacillus, it would appear to be necessary to use both the antistreptococcic serum and the tuberculin. It occurred to Marmorek to inoculate a horse with both microbes in order to produce simultaneous immunization. The new serum or "double serum" obtained in this manner has, in fact, been used by him with success, especially in cases of hectic fever. The injections are claimed to be innocuous and the treatment to have, therefore, no contraindications. In the general discussion which followed the paper the claim of the antituberculous serum to be regarded as a specific treatment of pulmonary disease was not admitted; and the statement that the treatment was innocuous was denied. Experiments at the Hotel Dieu some years ago gave unfavorable results. Rabbits were inoculated with tuberculous sputum, and half were treated with Marmorek's serum and the other half left untreated for comparison. The injections of serum were made personally by Marmorek. Everyone of the rabbits thus treated died long before the control animals. In reply to these strictures, Marmorek claimed that the technique had formerly been at fault, but recently this had been improved. The testimony of a large number of experimenters proved that the injections as now conducted are harmless. Further experience will be required to definitely determine the real value of the treatment.

NEW YORK MEDICAL JOURNAL

INCORPORATING THE

Philadelphia Medical Journal
and The Medical News.*A Weekly Review of Medicine.*

Edited by

FRANK P. FOSTER, M. D.,
and SMITH ELY JELLIFFE, M. D.

Address all business communications to

A. R. ELLIOTT PUBLISHING COMPANY,

Publishers,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, JANUARY 27, 1906.

MEAT INSPECTION IN THE UNITED STATES.

Last week we commented on some statements of the *Lancet's* concerning alleged shortcomings of the meat inspection service in this country. We ventured to suggest that our English contemporary had to some extent been misinformed, particularly as to the data on which it founded its statement that only hogs were inspected, and, of those animals, only such as were destined to be exported to Continental Europe, those intended for Great Britain and for home consumption going entirely without inspection.

Since then we have received the *Twenty-first Annual Report of the Bureau of Animal Industry*, for the year 1904. From this it appears that during that year there were 64,613,383 inspections of animals previous to their slaughter—namely, 12,599,831 of cattle, 14,633,129 of sheep, 1,143,962 of calves, and 36,236,461 of hogs. The post mortem inspections amounted to 39,590,370, including 6,383,080 of cattle, 8,269,133 of sheep, 767,927 of calves, and 24,170,230 of hogs. Of the living animals, there were rejected (subject to the results of post mortem examination): At the abattoirs, 757 cattle, 1,230 sheep, 500 calves, and 3,807 hogs; and in the stock yards, 42,263 cattle, 12,442 sheep, 6,555 calves, and 59,519 hogs. The numbers of carcasses condemned were 16,145 of cattle, 8,414 of sheep, 2,129 of calves, and 62,487 of hogs. This effectually disposes of the contention that only hogs are examined.

We find in the report no explicit statement that animals destined to be consumed at home are inspected, but it seems reasonable to infer that they

are from the fact that all the foregoing data and many others are given before we come to the section entitled Inspection of Export Meats. The United Kingdom certainly is not wholly neglected by our inspectors, for we find that representatives of the Bureau of Animal Industry inspected 380,365 living cattle and 270,066 living sheep from the United States and Canada, the inspections being conducted at London, Liverpool, and Glasgow. Still, we presume that the special microscopical examination of hogs for trichina is practically confined to carcasses designed for export to those European countries that require it. But we suppose it is quite within the power of Great Britain to make such a requirement, though it might be looked upon as a work of supererogation, since it may be assumed that the British people do not eat raw pork.

However, while it thus appears that the American government's inspection of meat is by no means so inadequate as the *Lancet's* article would make out, we have no disposition to ignore the great desirability of even greater thoroughness in this most important means of preserving the health of Americans and of guaranteeing the wholesomeness of our exported meat.

MEDICAL LEGISLATION IN WASHINGTON.

The Legislative Council of the American Medical Association, which met lately at Washington, for the purpose of influencing Congressional action, produced a most comprehensive list of objects to be attained, though the meeting itself lasted but for three days. The avowed object of action was the army and navy reorganization bill, which is framed to increase the rank and consequently the pay and emoluments of medical officers in the service, and the council succeeded in obtaining a conference with the House Committee on Military Affairs, which lasted practically for an entire morning. They also endorsed the bill of Mr. Morrell for the reestablishment of the army canteen and the pure food legislation, in which Senator Heyburn, of Idaho, is interested, and approved of the proposed change in the laws regulating the commitment of the insane to hospitals and asylums and the increased restriction affecting the manufacture and sale of patent medicines.

The real object of paramount interest, however, was unquestionably the proposed Department of Public Health, which should be under the control of a cabinet officer. This secretary was to be a medical man, and to him were to be referred all questions of medical interest. He was also to be the official head of the various sanitary bureaus which are now under the control

of other departments. The discussion on this subject was long and protracted, but the council decided to prepare a bill and the meeting finally adopted the resolutions to the effect that it was the sense of the National Legislative Council that a Department of Public Health with representation in the cabinet of the President ought to be established, such department to embrace an expansion of the present health agencies in operation in other departments of the government, together with such additional agencies and functions as might best subserve the public welfare; also that the Committee on Legislation appointed by the American Medical Association proceed at once with the preparation of a bill for this purpose, to be presented to Congress at the earliest practical time—if possible, at the present session. That such a bill will be enacted there is much doubt, for this session is so crowded with other legislation, so occupied with rate bills, tariff quarrels, canal affairs, and political strife, that, of the many bills that are introduced, probably few will be passed.

THE SANITARY VALUE OF WATER ANALYSIS.

In the presence of an overwhelming mass of testimony establishing the causal relation of polluted water to certain diseases, there can be no question as to the importance of an analysis of water which is to be used for drinking or other household purposes. Professor Leonard P. Kinnicutt, in his address as chairman of the section in chemistry of the American Association for the Advancement of Science, at its meeting in New Orleans last month, reviews this subject and directs attention to certain conditions which should be observed in order to render a water analysis most serviceable (*Science*, January 12th).

The late Professor Thomas M. Drown divided all waters into two classes, the normal and the polluted. The normal waters may differ among themselves in their color and their constituents, but are distinguished from polluted waters by the very important fact that they are not capable of producing, so far as is known, any specific infectious disease in human beings. The principal sanitary value of a water analysis, therefore, depends not on the determining amount of organic matter which the water contains, but on the information it can give in answer to the question, Is a given water a normal or polluted water?—in other words, upon the sufficiency of the analysis to determine whether or not the organic matter in the water is of vegetable or animal origin. To afford a satisfactory answer to this involves more than a chemical or bacteriological examination; there must be a survey of the

water shed if possible, and an investigation as to sources of sewage pollution. "If sewage is seen to be entering a pond, an analysis is unnecessary. If the water shed is uninhabited, the water cannot be polluted." A knowledge of the source of the water, whether surface, subsoil (or ground), or artesian, therefore, is an important prerequisite, and this must also be considered in interpreting the results of the laboratory tests. Another point of practical importance is that qualitative analysis alone cannot be relied upon. For instance, organic nitrogen is found in all surface waters, both natural and polluted. Sir Edward Frankland concluded that if the ratio of nitrogen to carbon in the residue left after evaporation was as low as 1 to 3, the organic matter was of animal origin; if as high as 1 to 8, it was chiefly if not exclusively of vegetable origin.

PRESENT METHODS OF WATER ANALYSIS.

At the present day a simpler method known as the albuminoid ammonia method of Wanklyn, is used for determining the nitrogen of the undecomposed nitrogenous compounds. It is approximative, but yields valuable indications as to the source of such compounds. When a surface water gives a greater amount of nitrogen as free ammonia than it does as albuminoid ammonia, by Wanklyn's method, the indications are that the water has certainly been polluted by sewage. In water containing an infusion of leaves, the combined nitrogen is from 10 to 20 times the nitrogen in free ammonia. "Consequently a low ratio, as 1 to 5, between the nitrogen of the free ammonia and the nitrogen of the albuminoid ammonia indicates pollution." As regards nitrites, more than .002 of a milligramme to the litre is an unfavorable indication; and as to nitrates, higher amounts than 0.1 of a milligramme to the litre are unusual and suspicious. All waters near the ocean contain chlorides, also those arising in certain regions where there are salt bearing strata. The rule may be formulated that "chlorine above the normal of the region indicates pollution," and suggests pollution by sewage.

With regard to the bacteria, Sternberg's standard is pronounced fairly satisfactory; i. e., water containing 500 bacteria to the cubic centimetre is open to suspicion, and 1,000 indicates presumable sewage or surface drainage. The detection of the colon bacillus by culture is more conclusive than the mere count, and establishes sewage pollution.

Owing to the presence of varying proportions of minerals in artesian water, the permissible proportion of nitrogen and chlorine may be much larger than would be safe in ground or surface water, especially if the water has passed through fossil

remains. Unfortunately artesian springs may be polluted by surface drainage. If the nitrogen as albuminoid ammonia is greater than 0.02 of a milligramme to the litre, suspicion of sewage contamination should lead to a search for the colon bacillus. Acid forming bacteria and the colon bacillus should never be found in artesian waters.

In order to form a judgment as to the wholesomeness of water, therefore, we should not only have the data of a sanitary water analysis, but also, according to Kinnicutt, know the source of the water, whether surface, ground, or artesian. A mere survey, even of a surface water, though it may determine whether or not the water is visibly polluted, does not give the amount or condition of the polluting matter, and with ground or artesian water it can give very little information. The final judgment as to the notable character of such waters, as a rule, depends upon the sanitary analysis.

THE ÆTIOLOGY OF GENERAL PARESIS.

It is now some forty years since Fournier coined the very suggestive and at the same time elusive terms metasyphilitic and parasyphilitic to denote a class of pathological lesions which even at the present time have not received the stamp of unreserved approval. Among the diseases associated with this peculiar type of tissue change he placed tabes dorsalis and dementia paralytica, and in the minds of the majority of observers the relationship seems to be established. At least this inference may be drawn for general paresis from the discussion on the ætiology of general paresis held before the New York Neurological Society in December, in which many noted neurologists and alienists took part.

Statistical studies, for this affection as for many others, offer little conclusive evidence, for, as Dr. Sachs so well brought out, the inconsistencies of statistics are due to the difficulties in establishing a clinical picture for general paresis. The more closely the disease has been studied, the more have alienists been impressed with the conviction that the term general paresis includes a number of very divergent clinical pictures. Dr. Meyer stated in this connection that an absolute diagnosis of general paresis could be made out in only ninety per cent. of the cases, and that a margin of ten per cent. was left to autopsy findings. The larger and more important question of anatomical evidence for diagnostic purposes then arose, and the conclusive words in this discussion have not been uttered.

It was the feeling of many of those taking part in the discussion that alcoholism, injury, and stress might be possible primary causes, although

practically all agreed that syphilis could not be excluded. Dr. Gregory, chief of the psychopathic ward at Bellevue, who has had an unusual opportunity to observe general paresis in its early stages, is very emphatic in his belief that syphilis is a requisite factor.

The highly vital question of prognosis was not dealt with *in extenso*, but enough was said to put a damper upon the optimism which has been expressed in some quarters. It was rather conclusively shown that remissions had been diagnosed as cures, but more particularly that a faulty diagnosis was the factor that had given color to the optimistic decisions of certain clinicians. When it is recalled that Dr. Meyer has allowed a ten per cent. margin of practically undiagnostic cases, it seems not improbable that the patients with apparent general paresis who recovered had some other pathological process.

Summing up, in the words of Dr. Gregory, we may say that at least three factors are highly important for the development of general paresis: a constitutional neurotic inheritance, syphilis, and an exciting cause, such as stress of life, mental or physical strain, injury, or an intoxication of some kind. As to the prognosis of true general paresis, he believes it to be uniformly bad. The general tendency has been to give too gloomy a prognosis as to the rapidity of the progress of the disease, however; whereas fatal results are uniform, they may be greatly delayed, and remissions are very frequent.

THE TRENDLENBURG POSTURE.

We have long felt that this posture, embarrassing and oppressive as it is to a person in perfect health and not subjected to the shock of anæsthesia and a surgical operation involving one of the great splanchnic cavities, must be prejudicial to a patient's welfare. We have, however, refrained from giving expression to this feeling, for we have not had at our command concrete facts to support it. We must therefore credit the *British Medical Journal* with having collated in its issue for December 30th a number of observations which go to show the occasional danger of the posture and of its sudden exchange for ordinary recumbency.

Our London contemporary, while conceding the advantage of the posture to the surgeon in certain abdominal operations and its benefit to the patient from the fact that it puts the intestines out of the way of accidental injury, calls attention to the interference with the action of the heart and lungs that must be inseparable from the gravitation of the abdominal viscera in a direction leading to their making pressure on the diaphragm and consequently

on the thoracic organs. We are getting more and more to appreciate the danger of general anæsthetics, and we know that that danger is intimately connected with their depressing action on the heart and lungs; consequently we must look with more or less misgiving on any agency which tends to cripple those organs at the time of an operation. We can hardly escape the conviction that encroachment upon the thoracic space by pressure constitutes such an agency.

But it is not alone by embarrassing the heart and lungs that Trendelenburg's posture may prove prejudicial; it may even prove directly and undeniably fatal—that is, by its sudden replacement by ordinary recumbency—by intestinal strangulation, as has been shown by M. Pasteau, whose observation is cited from one of the July numbers of the *Bulletins et mémoires de la Société anatomique de Paris*. A case of Schauta's is also mentioned, one in which volvulus of the ileum followed supravaginal amputation of the uterus and recurred after a second operation. Heidenhain is mentioned as having re-reported another instance of volvulus of the small intestine after hysterectomy, and Kraske is said to have observed torsion of the large intestine in two cases after suprapubic lithotomy.

THE "THAUMATURGIC PANOPATHIST."

The *New York Times* has performed a real service in the wide publicity it has given to the exposure of a picturesque scoundrel calling himself a "thaumaturgic panopathist." This designation is original and unique in the annals of quackery, and the other quacks might have been hard pressed by this new cult if the energies of the counsel of the Medical Society of the County of New York, acting in conjunction with the United States district attorney's office, had not brought its operations to a premature and sudden stop. The most extraordinary feature of this latest medical fraud on the public is the respectable personnel of the "Force of Life Chemical Company," the legal name of the concern through which its extensive transactions were conducted. Among the officers and directors who shared in the profits of the malodorous enterprise, in comparison with which the trade of a sneak thief would seem an honorable calling, are included a former special agent of the United States Treasury Department and assistant commissioner of immigration in the port of New York, a former New York State superintendent of insurance, a trustee of a New York savings bank, an ex-lieutenant governor of Connecticut, the president of a national bank, and the general manager of a street railway company.

IS THE DOCTOR AN EASY MARK?

January is the month of maturing obligations, stock taking, and new ventures. It is not a bad idea for the physician at this season to sit down and add himself up along with the rest of the business world. His singular willingness to do a large amount of valuable work without remuneration (a trait not shared by members of other professions) is perhaps one reason why business men commonly regard the doctor as little more than an amiable fool where the investment of money is concerned. This belief is also often contributed to by his own easy credulity in dubious financial propositions of many kinds. For a man of trained judgment, his record in this respect has not been a very creditable one. It is a humiliating circumstance that the list of customers of a notorious bucket shop, recently defunct, contained the names of a large number of physicians. We know many doctors who lend a willing ear to the Wall Street tipster to the pecuniary detriment of themselves and their families, and within the past year the newspapers have contained reports of the litigation and financial troubles of a distinguished physician who lost the savings of a lifetime through the swindling operations of a mining promoter.

Within the past few months we have culled from our mail extraordinary prospectuses and alluring invitations to invest in rubber plantations in Mexico, shares in the Thunderbolt Mining and Exploitation Company of Arizona, the Trickster Liquid Hot Air Syndicate—unlimited, preferred stock in the Dope Institute for Inebriates (with an imposing array of reverend "advisory directors" who ought to be in better company), suburban lots in Whitherville with the guarantee of the Hydrated Realty Company that they would advance a hundred per cent. in a hundred days—a free paid up life insurance policy with each lot—the Sun Burst Diamond Oil Wells of Idaho, the Wireless and Wordless Telegraph Company, and so *ad infinitum*. These propositions were not intended to be humorous, but were supposed to be more or less serious appeals to the judgment of physicians with money to invest. They are not very flattering to our intelligence and financial acumen, and yet from the persistency with which they appear they cannot be without profit to their originators. When we see in our own ranks so many ready victims of financial charlatanry of all kinds, it should temper somewhat our censure of the public's love of medical quackery. As a general rule the physician should preserve an attitude of healthy skepticism toward all financial propositions which promise a greater return than four or five per cent.

THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

The programme of the one hundredth annual meeting, to be held in Albany on January 30th and 31st and February 1st, provides for fewer special papers (only eighteen) than are usually presented, but this restriction has doubtless been arranged to allow of time for the addresses, some of which are distinguished as "orations." Besides the address by the president, Dr. Joseph D. Bryant, of New York, others will be given by the Honorable Grover Cleveland, the Honorable St. Clair McKelway, the Honorable Francis W. Higgins, the Honorable Charles H. Gaus, Dr. Samuel B. Ward, Dr. Hermann M. Biggs, Dr. William Osler, Dr. W. W. Keen, Dr. Nicholas Senn, and Dr. William H. Welch. The meeting will be the first to occur since the consolidation of the New York State Medical Association with the society, and it is announced that a history of the society's first century of work will be presented.

DR. WYETH ON GENERAL LEE.

It was a graceful and eloquent address that Dr. John A. Wyeth delivered last week before a company assembled in New York to do honor to the memory of the illustrious General Robert E. Lee, on the occasion of Lee's birthday. The whole American people, Northerners and Southerners alike, revere the character of General Lee, and it cannot but be gratifying to the medical profession that one of their number gave such fit expression to the feeling.

THE PUTRESCENT OYSTER.

Little as we may be inclined to look upon the oyster as a frequent agent in the transmission of specific disease, we must all admit that in a state of decay, whether incipient or advanced, the oyster is totally unfit to be taken into the stomach, for it is almost sure to give rise to acute indigestion, and in some instances it causes digestive derangement of a lingering character. The same may be said of clams and other shell fish, which under certain conditions are apt to be brought to market in a damaged state.

Obituary.

WILLIAM B. NEFTTEL, M. D.,

OF NEW YORK.

Dr. Nefttel, a Russian physician, was a graduate of the University of St. Petersburg, of the class of 1852. He came to New York many years ago, and entered upon general practice. From the outset of his career here he was especially interested in neurology, and of late years he had restricted his practice to that field. He was

among the first of our practitioners to make extensive and intelligent employment of electricity in practice. He was a man of winning personality, and he had many warm friends among the older members of the profession in New York.

News Items.

NEW YORK CITY AND STATE

The Hudson River State Hospital for the Insane, at Poughkeepsie.—Dr. Dean Mattimore, of Catskill, has been appointed a sixth grade physician at the hospital.

Changes of Address.—Dr. William Ward Van Valzah, Dr. James Douglas Nisbet, and Dr. William Van Valzah Hayes, to 34 West Fiftieth Street.

A Joint Meeting of the Otsego (N. Y.) County Medical Society and the County Medical Association was called for January 27th at Oneonta, for the purpose of perfecting the consolidation of the two county bodies.

The Onondaga (N. Y.) County Medical Society.—A special meeting of the society was called for Saturday, January 20th, to take action on the resolution passed by the House of Delegates of the New York State Medical Society and to consider the new by-laws submitted by the State Society.

The Chenango (N. Y.) County Medical Society.—At the annual meeting, held at Norwich on Tuesday, January 9th, the following officers were elected: President, Dr. B. A. Harris, of Norwich; vice-president, Dr. Charles Palmatier, of Plymouth; secretary, Dr. Frank Preston, of Greene; treasurer, Dr. S. M. Hands, of Norwich.

The Syracuse (N. Y.) Academy of Medicine.—The following programme was arranged for a meeting, to be held on Tuesday, January 23rd: A paper on Food Stagnation, by Dr. I. Harris Levy; An Unusual Case of Face Presentation, with Anencephalic Monster. Specimen shown by Dr. E. W. Belknap.

Association of the Alumni of the College of Physicians and Surgeons, New York.—The annual meeting will be held at the Hotel Astor, Broadway and Forty-fourth Street, on Tuesday evening, January 30th, at 8 o'clock. Mr. Dwight Elmendorf will give an illustrated talk on Tunis, and there will be a collation.

The New Bellevue Hospital.—Judge Truax has dissolved the injunction, secured by an unsuccessful bidder for the contract to erect pavilions A and B of the new hospital, and the contractor for the new work will commence at an early date to raze the two brick buildings used for isolation wards and for phthisis patients.

The Plattsburgh (N. Y.) Physicians' Club.—The first anniversary of the club was celebrated on Tuesday, January 16, 1906. The monthly meetings of the club have been well attended and have contributed to a better professional feeling among its members. At the meeting of January 16th the following officers were elected: President, Dr. D. S. Kellogg; secretary, Dr. T. Avery Rogers.

The Jefferson (N. Y.) County Medical Society.—The annual meeting of this society was held at Watertown, on Tuesday, January 9th. The election of officers resulted as follows: President, Dr. H. C. Potter, of Mannsville; vice-president, Dr. G. D. Gregor, of Watertown; secretary, Dr. C. E. Pierce, of Watertown; treasurer, Dr. C. M. Rexford, of Watertown.

The Genesee (N. Y.) County Medical Society.—A meeting was to be held at Batavia on Thursday, January 18th, for the purpose of reorganizing under the by-laws of the State Society. The scientific programme for the meeting included the following papers: High Frequency Currents as Applied to Metabolism, by Dr. W. W. Johnson, of Rochester; Puerperal Eclampsia, by Dr. Messenger, of Oakfield.

The Wayne (N. Y.) County Medical Society held its semiannual meeting at Newark, N. Y., on Tuesday, January 16th. A paper on Pleuritis was read by Dr. J. F. Meyers, and Dr. A. A. Young read a paper on Epidemic Influenza. A committee of three was appointed to examine the new by-laws controlling the actions of the society and make a report at the next meeting, to be held at Palmyra on the second Tuesday of April, 1906.

The Medical Society of the County of New York.—The following programme was announced for a meeting held on

Monday, January 22nd: The Cold Fresh Air Treatment of Pneumonia, by Dr. William P. Northrup; Some Problems in the Treatment of Pneumonia, by Dr. Egbert Le Fevre; a general discussion to follow; the Very Early Diagnosis of Tuberculosis by the Direct X Ray, with stereopticon demonstration, by Dr. Lewis G. Cole.

The College of Medicine of Syracuse University.—The teaching force of the faculty has been increased by the following appointments: Dr. W. D. Alsever, Dr. H. B. Doust and Dr. E. H. Shepard have been appointed instructors in clinical chemistry and microscopy; Dr. C. N. Smith and Dr. H. C. Gifford, instructors in histology; Dr. H. S. Brayton and Dr. J. S. Heiman, demonstrators in anatomy. All are graduates of Syracuse University.

The Chautauqua (N. Y.) County Medical Society.—At a meeting held at Jamestown, on Thursday, January 18th, the following officers were elected: President, Dr. V. D. Bozovsky, of Dunkirk; vice-presidents, Dr. C. H. Richards, of Dunkirk, and Dr. B. S. Swetland, of Brocton; secretary and treasurer, Dr. H. A. Eastman, of Jamestown. The next meeting of the society will be held on the last Tuesday in May, 1906.

The Brooklyn Pædiatric Society.—(The section in pædiatrics of the Medical Society of the County of Kings.)—The following programme was arranged for a meeting held on Wednesday, January 24th: The Physically Abnormal Child, Abnormalities of the Head, by Dr. William Hutchinson; Abnormalities of the Chest and Trunk, by Dr. Louis C. Ager; Abnormalities of the Extremities, by Dr. Bernard Fedde; reports of cases.

The Lewis (N. Y.) County Medical Society and the Lewis County Medical Association held a joint special meeting at Lowville, on Tuesday, January 16th, for the purpose of effecting a consolidation of the two bodies. The society will hereafter be known as the Lewis County Medical Society. The following officers were elected: President, Dr. F. E. Jones, of Beaver Falls; vice-president, Dr. O. G. Harrington, of Constableville; secretary, Dr. H. A. Pawling, of Lowville; treasurer, Dr. I. D. Spencer, of Croghan.

The Franklin (N. Y.) County Medical Society held its annual meeting at Malone, on Tuesday, January 9th. The following officers were elected for the ensuing year: President, Dr. W. A. Wardner, of St. Regis Falls; vice-president, Dr. G. G. Rambaud, of Saranac Lake; secretary and treasurer, Dr. G. M. Abbott, of Saranac Lake; censors, Dr. G. H. Oliver and P. F. Dolphin, of Malone, and Dr. E. G. McClellan, of Saranac Lake. The next annual meeting of the society will be held at Saranac Lake.

The Allegany (N. Y.) County Medical Society held a meeting at Cuba, N. Y., on Thursday, January 18th, for the purpose of reorganizing. Officers for the ensuing year were elected as follows: President, Dr. Horace Leland Hulett, of Allentown; vice-president, Dr. John C. Young, of Cuba; secretary and treasurer, Dr. George E. Burdick, of Andover; delegate to State Society, Dr. George H. Witter, of Wellsville. The next meeting will be held at Friendship on April 12, 1906.

The Quiz Medical Society of New York City.—The twenty-seventh regular meeting of this society will be held at the University Club, on Saturday, February 10th, at 7 p.m. The general subject for discussion will be The Proper Relation of Hospitals to Medical Teaching, and as a basis for argument the following short papers will be presented: The Use of the Wards: Medical Aspect, by Dr. Howland; Surgical Aspect, by Dr. Hartwell; The Use of the Dispensary: Medical Aspect, by Dr. Patterson; Surgical Aspect, by Dr. Douglass; The Use of the Laboratory, by Dr. W. C. Clarke; Clinical Microscopy, by Dr. Jessup.

Civil Service Examinations for the State and County Service.—The State Civil Service Commission announces examinations to be held on February 17, 1906, for various positions, among which are Superintendent for Placing Dependent Children, Onondaga County, \$900; Trained Nurse, State Institutions, \$420 to \$600 and maintenance. The last day for filing applications for these examinations is February 12th. The commission also announces an examination to be held about March 1st for Pathologist at the Craig Colony for Epileptics at \$2,500 and maintenance. Application forms and detailed information may be obtained by addressing the chief examiner of the commission at Albany.

Bellevue Hospital Appointments.—The following changes in the staff of this hospital have been made recently: Dr.

Charles Phelps, who has been visiting surgeon to the hospital since 1878, and Dr. William F. Fluhrer, who has been visiting surgeon since 1882, have resigned, and the board of trustees has appointed them consulting surgeons. Dr. L. W. Hotchkiss, who has been assistant visiting surgeon for twelve years, and Dr. Thomas A. Smith, who has been assistant visiting surgeon for six years, have been promoted to visiting surgeons. Dr. James C. Ayer has been advanced to the grade of assistant visiting surgeon, and Dr. Arthur S. Vosburgh has been appointed adjunct visiting surgeon.

The Ulster (N. Y.) County Medical Society and the Ulster County Medical Association held a joint meeting at Kingston on Thursday, January 18th, for the purpose of effecting the amalgamation of the two societies. The following officers were elected for the ensuing year: President, Dr. E. E. Norwood, of Kingston; vice-president, Dr. David Mosher, of Marlborough; secretary, Dr. Mary Gage-Day, of Kingston; treasurer, Dr. E. H. Loughran, of Kingston; censors, Dr. Frederick Hühne, Dr. Daniel Conelly, Dr. A. H. Mambert, of Kingston; Dr. Luther Emerick, of Saugerties, and Dr. C. V. Hasbrouck, of Rosendale; delegates to the State Medical Society, Dr. Henry Van Hoevenberg and Dr. James L. Preston, of Kingston.

The East Side Physicians' Association of the City of New York.—A meeting of this association was held on Friday, January 19th. The following programme was arranged for the occasion: Presentation of patients, reports, pathological specimens, new instruments, etc. (a) A Case of Scleroderma, by Dr. B. F. Ochs; (b) A Case of Angioneurotic Edema in a Child, by Dr. H. Schwartz; (c) A Case of Sarcoma of the Lungs and Pleura in a Young Girl, by Dr. R. Abrahams. (d) Fibroid Tumors of the Uterus: (a) Suppurating Interstitial Fibroid Simulating Pregnancy; (b) Interstitial Fibroid Complicated by Early Pregnancy, by Dr. A. Brothers; address by the president, Dr. W. S. Gottheil. Paper: Some Clinical Types of Toxæmia, by Dr. C. E. Quimby; discussion by Dr. C. F. Wainright, Dr. I. M. Rottenberg, Dr. H. Stern, Dr. F. A. Dorman, Dr. L. Lowria, and other members.

The Mortality of Troy, N. Y., for December, 1905.—The report of the health officer for the month of December has been published by the department of public safety and is as follows: Mortality—The total deaths were 125. The death rate in a thousand was 17.48. Twenty died from infectious diseases, 16 from consumption, 22 from pneumonia, 3 from bronchitis, 7 from Bright's disease, and 4 from typhoid fever. Eleven, or 8.8 per cent., of the total deaths were in children under five years of age. During the month of December 78 cases of infectious diseases were reported. Thirty-four deaths occurred in public institutions, of which 13 were reported as nonresidents. Mortality for the month of December, 1905: Males, 67; females, 58; total, 125. Thirteen of these were nonresidents. Annual death rate in 1,000, less nonresidents, 17.48. Births reported, 80; males, 41; females, 39. Annual birth rate in 1,000, 12.48. Marriages, 47.

The Centennial Celebration of the Medical Society of the State of New York.—In addition to the addresses by speakers whose names were announced in our issue for January 20th, the following programme will be presented: The Art and Science of Fitting Glasses, by Dr. A. E. Davis; The Immediate and Early Treatment of Ocular Injuries, by Dr. Alvin A. Hubbell; Typhoid Fever, by Dr. Luzerne Coville; Rapid Method of Detection of Blood in Fæces, by Dr. A. L. Benedict; Economy in Hospital Management, by Dr. John A. Wyeth; Toxic Arthritis, by Dr. Henry A. Fairbairn; Report of a Case, by Dr. J. F. Whitbeck; Arteriosclerosis, by Dr. J. M. Van Cott; A Point in the Technique of Breast Amputation for Cancer, by Dr. R. F. Weir; Induction of Hyperleucocytosis in Infections, by Dr. W. G. Macdonald; Notes on Factors Which Further Convalescence Following Abdominal Section, by Dr. F. H. Wiggin; A Study of Results of Sanatorium Treatment of Pulmonary Tuberculosis, by Dr. J. H. Pryor; A Contribution to the Ætiology of Uterine Fibromyomata, by Dr. George McNaughton; Exophthalmic Goitre, by Dr. W. Gilman Thompson; The Role Played by the Medical Society of the State of New York Concerning Medical Education, by Dr. William Warren Potter; The Clinical Limitations of Eliminative Treatment, by Dr. Allen A. Jones; Somatic Evidences of Syphilis in Paretics, by Dr. James McF. Winfield; The Falsity of the Oath as at Present Administered, by Dr. William Browning.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending January 20, 1906:

	January 20.		January 13.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	1,487	17	1,214	15
Diphtheria and croup	359	46	371	62
Scarlet fever	237	10	222	7
Small-pox .....	..	..	2	..
Chickenpox	205	..	205	..
Tuberculosis	448	159	397	173
Typhoid fever	35	5	32	6
Cerebrospinal meningitis	28	15	23	26
	2,799	252	2,466	289

Society Meetings for the Coming Week:

TUESDAY, January 30th.—Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, January 31st.—Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

THURSDAY, February 1st.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, February 2nd.—Practitioners' Society of New York (private); Manhattan Clinical Society; Clinical Society of the New York Post-Graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, February 3rd.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

PHILADELPHIA AND THE MIDDLE STATES

Change of Address.—Dr. W. Howard Lyle, to 1505 Girard Avenue, Philadelphia.

Personal.—Dr. William Osler lectured to the medical classes at the University of Pennsylvania on January 16th.

Baron Kanehiro Takaki, surgeon general of the Japanese Imperial Navy, visited the University of Pennsylvania and addressed the American Academy of Political and Social Science, on January 20th.

Scientific Society Meetings in Philadelphia for the Week Ending February 3, 1906.—Tuesday, January 30th, Medico-Legal Society. Thursday, February 1st, Obstetrical Society; Medical Society of the Southern Dispensary; Section Meeting, Franklin Institute. Friday, February 2nd, American Philosophical Society.

Advisory Board for the Philadelphia Hospital.—Director of Public Health and Charities, Dr. W. M. L. Coplin, announced the appointment of the following advisory staff for the management of the affairs of Blockley: Dr. Alfred Stengel, Dr. Charles H. Frazier, Dr. Lawrence F. Flick, Dr. William L. Rodman, Dr. S. Solis Cohen, and Dr. L. W. Steinbach.

The State Hospital for the Insane at Norristown, Pa., graduated its class of trained nurses on January 17th. The class consisted of Mr. Calvin Eppeley, Mr. T. L. Wilson, Miss N. Mohn, Miss M. McCloskey, Miss C. McCloskey, Miss D. Hines, Miss A. Pattison, Miss C. M. Fox, Mr. A. M. Edwards, Mr. W. M. Hackman, Miss L. Detweiler, Mr. J. Neiman, Mr. Carl Williams, and Mr. Thomas E. Libbey.

The Philadelphia Medical Club.—The annual meeting of the Medical Club was held on January 19th at the Majestic. The following officers were elected: President, Dr. R. G. Curtin; first vice-president, Dr. Wharton Sinkler; second vice-president, Dr. Henry Beates; secretary, Dr. J. Gurney Taylor; treasurer, Dr. Lewis H. Adler; member of board of governors, Dr. G. G. Davis.

The Children's Hospital of Philadelphia.—The contributors to the Children's Hospital held their annual meeting on January 13th. The following members of the board of managers was elected for 1906: Charles Platt, Dr. Robert G. Le Conte, Thomas Willing Balch, Dr. William B. Cadwalader, Arthur H. Lea, Edward C. Dale, and Stevens Heckscher. At a subsequent meeting of the board Charles Platt was elected president; Emlen Hutchinson, vice-president; Edward S. Sayres, secretary, and Charles W. Cushman, treasurer.

The Gloucester (N. J.) County Medical Society.—At the annual meeting of the society, held at Woodbury on Thursday, January 18th, the following officers were elected for the ensuing year: President, Dr. C. Frank Fisher, of Clayton; vice-president, Dr. M. Jones Luffbary, of Glassboro; secretary and treasurer, Dr. George E. Reading, of Woodbury; reporter, Dr. W. G. Simmons, of Swedesboro; censors, Dr. Harry A. Stout, of Wenonah; Dr. James Hunter, Jr., of Westville, and Dr. Luther M. Halsey, of Williams-town.

The Philadelphia Polyclinic.—Dr. Isabelle P. Gibby, of Boston, Mass.; Dr. Frank A. Keller, of Chiang sha, Hunan, China; Dr. J. C. Stever, of Mt. Union, Pa.; Dr. Edward F. Glaser, of San Francisco, Cal.; Dr. A. E. Focht, of Springdale, Ark.; Dr. O. H. Paxson, of Christiana, Pa.; Dr. Thomas F. Downing, of McKendree, W. Va.; Dr. William Waldrop, of Bessemer, Ala.; Dr. J. W. Cavitt, of Bryan, Tex.; Dr. H. Tuttle, of Covington, Pa., and Dr. J. E. Robins, of Charleston, W. Va., are registered at the Philadelphia Polyclinic and College for Graduates in Medicine.

Charitable Bequests.—By the will of Dr. Thomas C. Potter, who died recently in Germantown, his medical library is bequeathed to the University of Pennsylvania. In case that institution declined the gift it is to revert to the Germantown Hospital. At the death of his widow the University of Pennsylvania receives \$10,000 to build a house in the dormitory system, to be known as the John C. Potter Dormitory.

By the will of Moses Geisenberger, who died at Lancaster, Pa., the Jewish Hospital, the Jewish Asylum, and the Jewish Foster Home receive \$500 each.

By the will of Francis W. Lang St. Timothy's Hospital receives \$5,000 to endow a free bed, to be known as the John Lang Memorial.

Philadelphia County Medical Society.—At the annual business meeting of the Philadelphia County Medical Society held on January 17th, the following officers were elected: President, Dr. Charles K. Mills; first vice-president, Dr. James B. Walker; second vice-president, Dr. A. O. J. Kelly; third vice-president, Dr. L. J. Hammond; fourth vice-president, Dr. A. B. Hirsh; fifth vice-president, Dr. Charles A. E. Codman; sixth vice-president, Dr. James C. Chestnut; secretary, Dr. William S. Wray; assistant secretary, Dr. Ross H. Skillern; treasurer, Dr. Collier L. Bower; censor, Dr. Frederick P. Henry; recommendation to the medical society of the State of Pennsylvania for district censor, Dr. Albert M. Eaton. The society voted to discontinue the publication of its proceedings.

Proposed Statue of Joseph Leidy for Philadelphia.—The following circular letter has been issued to secure contributions to a fund for the erection of a statue of Dr. Joseph Leidy in City Hall Plaza: As president of the Academy of Natural Sciences, professor of human and comparative anatomy and zoology in the University of Pennsylvania, and president of the Wagner Free Institute of Science, he added immeasurably to the position these institutions already held in the world of science. His reputation was not alone national, but international in character. It dignifies the city to which his fame belongs. Philadelphia, the place of his birth and death (1823-1891), and the scene of his labors for an uninterrupted period of half a century, that epoch-making period from 1840 to 1890, has thus far failed to show any practical appreciation of his varied labors in the field of original research. An appropriate statue can be erected for \$10,000. It is proposed, therefore, to raise this sum as speedily as possible. May we not count on your assistance? The appeal is signed by Robert Adams, Jr., Hampton L. Carson, John Wanamaker, Horace H. Furness, John H. Converse, Professor George H. Piersol, Dr. H. C. Chapman, C. Stuart Patterson, Dr. S. G. Dixon, Arthur E. Brown, Isaac H. Clothier, Russell Duane, Dr. F. X. Dercum, Dr. Horace Jayne, Dr. R. H. Harte, Dr. George De Schweinitz, Dr. Thomas Biddle, Dr. Joseph Leidy, Jr., George Vaux, Jr., Dr. Joseph P. Tunis, John Weaver, Edward de V. Morrell, Joseph Wharton, William W. Justice, Justus C. Strawbridge, Dr. William Osler, Joseph G. Rosengarten, Thomas Dolan, Clarence S. Bement, Talcott Williams, C. Hartman Kuhn, James Elverson, Dr. John H. Musser, Dr. Arthur V. Meigs, Dr. R. G. Le Conte, Dr. W. C. Posey, Dr. J. H. Adams, Edward B. Smith.

The Mortality of Philadelphia.—There were 633 deaths in the city during the week ending at noon, Saturday, Janu-

ary 20th, as compared with 582 last week, and 519 for the corresponding week of last year. The inclement and unseasonable weather was blamed by the health authorities as being possibly responsible for this increase, especially as most of the deaths were due to diseases of the respiratory system, such as consumption and pneumonia.

	This week.		Last week.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	240	16	267	23
Scarlet fever	66		47	1
Diphtheria	72	21	107	16
Totals	373	37	421	40

BOSTON AND NEW ENGLAND.

The South Boston (Mass.) Medical Association was organized on Friday, January 19th, with the following officers: President, Dr. W. H. Devine; vice-president, Dr. Elisha S. Boland; secretary, Dr. Robert N. Daley.

The Lawrence (Mass.) Medical Club.—At the monthly meeting, held on Monday, January 22nd, with Dr. A. H. Cutter chairman for the evening, Dr. G. S. Allen read a paper on The Toxæmias of Pregnancy.

The Hartford (Conn.) Medical Society.—The semi-monthly meeting of the society was held on Monday, January 15th. The subject for discussion was Pathological Technics, with exhibition of instruments and demonstration of methods. The subject was discussed by Dr. A. J. Wolff, Dr. O. R. Witter, and Dr. W. R. Steiner.

The Hampden (Mass.) District Medical Society.—The quarterly meeting of the society was to be held at Springfield, on Tuesday, January 16th. The programme included the following papers: Fracture of the Inferior Maxilla, by Dr. H. C. Martin, of Springfield; Some of the More Difficult Problems in Infant Feeding, by Dr. John L. Morse, of Boston; Infant Feeding from the Standpoint of the General Practitioner, and Locomotor Ataxia Complicated with a Charcot Joint, by Dr. J. L. Bliss, of Holyoke.

The York (Me.) County Medical Society.—The forty-third quarterly and twelfth annual meeting of the society was held at Biddeford, on Thursday, January 11th, the president, Dr. J. A. Randall, of Old Orchard, in the chair. The order for the meeting was as follows: Election of officers; a paper on Typhoid Fever at Sanford, by Dr. R. S. Gove, and one on Typhoid Fever at Springvale, by Dr. E. L. Burnham. A general discussion followed the reading of the papers. The following officers were elected: President, Dr. W. W. Smith, of Ogonquit; vice-presidents, Dr. M. H. Ferguson, of Biddeford, and Dr. R. S. Gove, of Sanford; secretary, Dr. C. L. Thompson, of Saco; treasurer, Dr. W. L. Prescott, of Kennebunkport.

BALTIMORE AND THE SOUTH.

The Memphis and Shelby County Medical Society.—The following was the programme for a meeting held at Memphis on Tuesday, January 16th: Empyema of the Antrum of Highmore, by Dr. Frank Bates; Delirium Tremens, by Dr. Edwin Williams; Typhoid Fever: Some Questions Answered with Reference to Diet, Hæmorrhage, etc., by Dr. Frank Jones.

The Medical Society of the Missouri Valley.—The next meeting of this society will be held at St. Joseph, on Thursday and Friday, March 22 and 23, 1906, under the presidency of Dr. John E. Summers, Jr., of Omaha. Among those who will contribute to the programme are: Dr. N. S. Davis, Dr. L. McArthur, and Dr. Fenton B. Turck, of Chicago; Dr. S. Grover Burnett, of Kansas City; Dr. Charles H. Mayo, of Rochester, Minn.; Dr. C. O. Thienhaus, of Milwaukee, Wis.; Dr. D. C. Gore, of Marshall, Mo.; Dr. Prince E. Sawyer, of Sioux City, Iowa.

The Mortality of Baltimore.—The report of the health department for the week ending January 13, 1906, shows a total of 195 deaths, compared with 208 in the corresponding week of last year, 228 in 1904 and 230 in 1903. The death rate in a thousand of population was: Whole, 16.87; white, 14.71; colored, 28.36. The principal causes of death were: Typhoid fever, 5; whooping cough, 4; diphtheria, 2; consumption, 28; cancer, 13; apoplexy, 11; organic heart diseases, 11; bronchitis, 4; pneumonia, 20; Bright's disease, 14. Six deaths occurred at Bay View Asylum, 36 in hospitals and 7 in other institutions. Twenty-four coroners' inquests were held. The births reported were: Total, 90; white, 74; colored, 16; males, 40; females, 50.

CHICAGO AND THE WEST.

The Pueblo (Colo.) County Medical Society.—At a meeting held on Wednesday, January 17th, the following officers were elected for the ensuing year: President, Dr. W. H. Campbell; vice-presidents, Dr. H. B. Oertel and Dr. A. E. Elder; secretary, Dr. Crum Epler; treasurer, Dr. Hubert Work; librarian, Dr. W. W. Bulette.

The Wayne (Mich.) County Medical Society.—At a meeting held at Detroit on Monday, January 15th, Dr. Ludwig Hektoen, of Chicago, delivered an address on the subject of Immunity in Theory, Practice and Experiment. The address was supplemented by a stereopticon demonstration illustrating some of the author's recent original researches in the subject.

The Journal of the Michigan State Medical Society.—At a meeting of the council of the Michigan State Medical Society, held at Detroit on January 12, 1906, Dr. A. P. Biddle resigned and Dr. B. R. Schenck was elected State secretary and editor of the Journal. Henceforth the address of the secretary of the State society and of the editorial and business departments of the Journal of the Michigan State Medical Society will be 502 Washington Arcade, Detroit.

The Fox River Valley (Wis.) Medical Society.—At the annual meeting, held at Green Bay on Tuesday, January 16th, the following officers were elected: President, Dr. Robert E. Minahan, mayor of Green Bay; vice-presidents, Dr. W. R. Hicks, Menominee, Mich., and Dr. H. W. Abraham, Appleton; secretary and treasurer, Dr. C. M. Echols; censor, Dr. W. E. Fairfield, Green Bay. The meeting closed with a banquet at the Hotel Frontenac. Dr. W. A. Gordon, of Oshkosh, delivered the principal after dinner address.

The Mortality of St. Paul, Minn., for 1905.—According to the records in the office of the health commissioner, St. Paul's death rate for 1905 was 9.41 for every 1,000 inhabitants. This is on a basis of a population of 190,000, and compares with a rate of 9.22 for 1904 on a basis of 185,000. The number of deaths in 1905 was 1,788, as compared with 1,707 in 1904. There were 141 deaths from violence in 1905, compared with 149 in 1904. During the year there were 6 homicides, 35 suicides, 97 accidental deaths and 3 poisonings. In 1904 there were 5 homicides, 29 suicides, 91 accidental deaths and 8 poisonings.

Statement of Mortality in Chicago for the Week Ending January 20, 1906, compared with the preceding week, and with the corresponding week of 1905. Death rates computed on United States Census Bureau's midyear populations—2,049,185 for 1906 and 1,990,750 for 1905:

	Jan. 20, 1906.	Jan. 13, 1906.	Jan. 21, 1905.
Total deaths, all causes	611	582	591
Annual death rate in 1,000	15.55	14.80	15.47
Sexes—			
Males	338	338	321
Females	273	244	270
Ages—			
Under 1 year of age	123	107	117
Between 1 and 5 years of age	45	38	55
Between 5 and 20 years of age	42	36	38
Between 20 and 60 years of age	259	282	250
Over 60 years of age	142	119	131
Important causes of death—			
Apoplexy	15	16	19
Bright's disease	43	44	51
Bronchitis	19	19	18
Consumption	69	66	77
Cancer	36	24	19
Convulsions	13	9	9
Diphtheria	9	11	9
Heart diseases	39	40	37
Influenza	6	4	22
Intestinal diseases, acute	21	27	23
Measles	3	0	5
Nervous diseases	29	16	20
Pneumonia	111	114	120
Scarlet fever	6	8	3
Smallpox	0	0	1
Suicide	7	14	9
Typhoid fever	5	9	26
Violence (other than suicide)	30	38	26
Whooping Cough	1	1	3
All other causes	149	122	111

Considering the abnormal character of the weather during the last six weeks or more, the public health continues to be surprisingly good. Except in a few widely separated localities there has been at no time during the winter any tendency to an epidemic spread of the contagious or infective diseases. Even in these localities the diseases—principally diphtheria and scarlet fever—have been combatted with a fair measure of success, and their mortality is diminishing.

Pith of Current Literature.

AMERICAN MEDICINE.

January 20, 1906.

1. Acute Osteomyelitis. A Plea for Early Diagnosis,
By EMIL KING.
2. Some Medicinal Plants of Angola, with Observations
on their Use by the Natives of the Province,
By F. CREIGHTON WELLMAN.
3. Ætiology, Symptomology and Treatment of Anal Fis-
sure,
By HERMAN A. BRAV.
4. Brief on Genitourinary Surgery,
By G. FRANK LYDSTON.
5. Ectopic Gestation,
By WILLIAM H. RANDLE.
6. Diabetic Purpura,
By C. HENRY LEFCOWITCH.

1. **Acute Osteomyelitis: A Plea for Early Diagnosis.**—King treats about osteomyelitis, which is the result of hæmatogenous infection, occurring in all ages, but by far most common during infancy and early childhood. The disease attacks most frequently the long bones of the upper and lower extremities. Staphylococcus aureus and albus are found in the pus, seldom the bacillus pyocyaneus. The only treatment is prompt operation removing the diseased area. Usually the diagnosis gives no trouble, but the operation should be decided on immediately, as forty-eight hours may suffice to devitalize the entire shaft of a long bone.

5. **Ectopic Gestation.**—Randle states that extra-uterine gestation occurs much more frequently than is generally recognized. He gives three varieties: Tubo-uterine, tubal, and tuboovarian. In regard to its ætiology he thinks it is common after long periods of sterility. Peritonitic adhesions and bands which obstruct the tube are also causes for it. The diagnosis before rupture is rarely made. Without surgical treatment about two thirds of the patients die, the remaining third escape the immediate danger of death. Abdominal section is, therefore, the only treatment worthy of consideration.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

January 18, 1906.

Tuberculosis Number:

1. Open Air Treatment of Bone Tuberculosis at the Wellesley Convalescent Home, with List of Thirty Permanently Cured Cases,
By E. H. BRADFORD.
2. What is the Relation Between Human and Bovine Tuberculosis, and How Does it Affect Inmates of Public Institutions,
By THEOBOLD SMITH.
3. Should the Tuberculous Insane in Hospitals be Segregated?
By O. F. ROGERS.
4. What Should be the State Policy Regarding Tuberculosis in Insane Asylums,
By OWEN COPP.
5. What Special Instructions Regarding Tuberculosis Should be Given Institution Nurses Caring for Cases of Tuberculosis in Danger of Contracting the Disease?
By JOHN H. NICHOLS.
6. On the Importance of Early Diagnosis in Cases of Pulmonary Tuberculosis,
By HERBERT C. CLAPP.
7. The Treatment of Tuberculosis in Public Institutions,
By WILDER TILESTON.
8. The Suppression of Tuberculosis in Our Dairy Herds,
By AUSTIN PETERS.
9. Day Sanatorium for Consumptives, Parker Hall, Boston,
By DAVID TOWNSEND.
10. A Report of Seventeen Cases in Open Air Treatment for Surgical Tuberculosis in Children,
By JOHN D. ADAMS.

1. **Open Air Treatment of Bone Tuberculosis at the Wellesley Convalescent Home.**—Bradford relates thirty cases in which he could show the condition of patients ten and twenty years after the cessation of treatment. The success of the so called open air treatment is very good, making it possible for the patients to become useful members of the society.

2. **What is the Relation Between Human and Bovine Tuberculosis?**—Smith summarizes that there are two types of mammalian tubercle bacilli; a bovine and a human type, and that the bovine type is occasionally

present in human tuberculosis. How often the invasion of the human subject with bovine bacilli takes place cannot be stated with any degree of accuracy, but it is interesting to note that in Japan, where milk does not play any appreciable rôle in the feeding of infants and children, human tuberculosis, including the intestinal disease, is as common as in other countries. Phthisis and the other forms of tuberculosis in adults are, so far as we know, almost wholly of human origin, and the bovine bacillus has been found almost exclusively in children under ten years of age. At present no absolute opinion can be given.

3. **Should the Tuberculous Insane in Hospitals Be Segregated?**—Rogers answers this question in the affirmative as the only rational, practicable, and not too expensive remedy for conditions that urgently demand relief.

5. **What Special Instructions Regarding Tuberculosis Should Be Given to Institution Nurses.**—Nichols thinks that no physician or nurse conscientious in its work ought to exhibit any timidity whatever in caring for consumptive patients when they are allowed to control the essential sanitary regulations. There should be the same instruction as given to the general public.

6. **The Importance of Early Diagnosis in Pulmonary Tuberculosis.**—Clapp gives his opinion on this question. Practically, lung specialists all over the world have proved that fully three fourths of the really early cases can be cured. It is, therefore, of the greatest importance to diagnosticate the disease as early as possible. The chest should be examined, a careful history be taken, the sputum be examined. Sometimes tuberculin is of some help.

7. **The Treatment of Tuberculosis in Public Institutions** should be, according to Tileston, the same as in sanatoria for tuberculous patients.

8. **The Suppression of Tuberculosis in Our Dairy Herds.**—Peters reviews our present knowledge about the tubercle bacillus. It seems that the human and bovine bacillus are varieties of the same germ. The human type has but little virulence for cattle, while the bovine species is very aggressive in cattle and other animals. The bovine species seems to be not so dangerous to men, while the human species is very virulent. The greatest care should be taken in the supervision of the cattle.

9. **Day Sanatorium for Consumptives.**—Townsend describes the life of the patients in the day sanatorium at Parker Hill. The camp was opened on July 6, 1905, and closed on October 31, 1905, having a daily capacity of 50 to 60 patients. In all, there were treated 128 patients from 8 to 64 years of age, 69 males and 59 females. Most of the patients improved, only three became too ill and had to be sent to a hospital, nine died at home, eight from the disease and one from other causes.

10. **Open Air Treatment for Surgical Tuberculosis in Children.**—Adams draws the following deduction from his investigation in seventeen patients that: 1. The results are sufficiently gratifying to adopt the shack treatment for convalescent patients, but for these alone. 2. Sunlight is an aid, but is not essential. 3. The average period of treatment should not be less than six months. 4. Ambulatory cases do better than inactive. 5. Climate is no specific.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 20, 1906.

1. The Theory of Narcosis,
By HANS MEYER.
2. The Breadth of the Profession of Medicine,
By JAMES H. MCBRIDE.
3. Rhythmic Sounds Produced by the Alimentary Canal,
By W. P. CANNON.
4. Rest in Pulmonary Tuberculosis,
By J. G. HILLEARY.
5. The Value of Hydrotherapy in the Treatment of Epilepsy,
By GUY HINSDALE.

6. **Tent Cottages for Consumptives.**
By E. FLETCHER INGALS and JOHN M. DODSON.
7. **The Operative Treatment of Fractures (Conclusion),**
By JAMES A. KELLY.
8. **A Case of Amaurotic Family Idiocy, with a Summary of Reported Cases,**
By MORTIMER FRANK.
9. **The Elimination of the Nostrum Traffic, an Evident Duty of American Physicians,** By M. T. WILBERT.
10. **The Treatment of Leucorrhœa with the Actual Cautery.**
By GUY L. HEMMER.

1. **The Theory of Narcosis.**—Meyer gives the following explanation of narcosis: The narcotizing substance enters into a loose physicochemical combination with the vitally important lipoids of the cell, perhaps with the lecithin, and in so doing changes their normal relationship to the other cell constituents, through which an inhibition of the entire cell chemism results. It also becomes evident that the narcosis immediately disappears as soon as the loose, reversible combination, dependent on the solution tension, breaks up. It follows further that substances chemically absolutely indifferent, as the volatile saturated hydrocarbons, can act as narcotics. That many narcotics induce not pure narcosis alone, but often show other distinct actions, as, for example, the occurrence of convulsions, which quite overshadow any narcosis present, is easily to be understood when one remembers that the narcotics may possess an affinity not only for the cell lipoids, but for other cell constituents as well, and through some union with these, concomitant effects quite different from narcosis may be induced.

3. **The Rhythmic Sounds of the Alimentary Canal.**—Cannon remarks that to one listening for the first time for rhythmic abdominal sounds, probably the most striking feature of what he hears is the large number of sounds which are not rhythmic. Most prominent among these irregular sounds are the sudden quick discharges or pops which can be heard, either singly or in a short series of three or four, almost at all times and in all parts of the abdomen, though most frequently on the right side. As already stated, these reports resemble the sound of bursting bubbles, and it may be that they are caused by the squeezing of gas from a mass of the food by general pressure of the intestinal wall. Occasionally a continuous little gurgling can be heard for some moments, gradually becoming less intense. It seems probable that peristalsis in the small intestine is thus manifested. Whether the observation of the sounds of the stomach and intestines is to be of clinical importance will depend on whether or not there are typical variations of these sounds in different diseases of the alimentary canal.

4. **Rest in Pulmonary Tuberculosis.**—Hilleary thinks it a safe rule in pulmonary tuberculosis to keep the patient quiet till every sign and symptom of the disease have disappeared and as long afterward as circumstances and necessity will permit. In the light of his experience in the treatment of this malady exercise has no place in the treatment, and should be allowed only when the arrest or cure has been attained and not then with the expectation of doing any good, but with the desire that the patient return to the full enjoyment of life. The action of exercise on the local process, according to Bernheim, is an active congestion in the region of the tuberculous focus and often new tears in the old adhesions, mobilization of the bacilli, thoracic pain, and sometimes hæmorrhage or the unexpected occurrence of the pneumothorax. Osler says: "Make the patient fat and the local disease will take care of itself."

6. **Tent Cottages for Consumptives.**—Ingals and Dodson give a description of the tent cottages designed and erected by Dr. W. T. Brown, the superintendent of the Valmora Branch at Watrous, N. M. The walls of these tents, as single or double cottages, are made of 3½ feet of planks, on top of which is 3½ feet of canvas, stretched on frames, the whole protected by a gable roof. A door and windows are also provided. This

method of construction gives plenty of fresh air, and still affords protection against severe weather.

7. **The Operative Treatment of Fractures.**—Kelly is of the opinion that all closed fractures do not require operative intervention for proper reduction and immobilization. In fact, perfect anatomical and functional results are obtained in the great majority of cases when treated by conservative means. There are, however, some cases in which reduction cannot be accomplished under anæsthesia, and in which the x ray photograph shows faulty approximation of the fractured ends. There are other fractures in which we know from experience that union will occur only with deformity, and the functional results thereby lessened. Other classes of fractures are frequently followed by nonunion. We should carefully discriminate between the various classes of fracture and select only those for treatment by operation, which would not be followed by perfect anatomical and functional results, if treated by nonoperative methods. The probability of infection following such operations in experienced hands and under proper surgical precautions, should be no more frequent than in operations on other structures.

8. **A Case of Amaurotic Family Idiocy.**—Frank writes that amaurotic family idiocy is a uncommon disease, first observed by Warren Tay in 1881, and receiving its name from Sachs in 1881. It is fatal, commencing in the early months of infant life with muscular weakness, progressing to almost complete paralysis, associated with a distinct symmetrical fundus appearance with failure of sight, total blindness finally ensuing, and terminating in death about the end of the second year. No definite exciting cause has been assigned. The child is born at full term, sound, and healthy until about the third month, when the signs of the disease commence to appear. Thirty-two authors have reported up to July 1, 1905, about fifty-four cases, twenty-two male and twenty-five female patients, in seven the sex is not given; twenty-seven cases occurred in Jews, six in Gentiles; of twenty-one no data are given. The youngest patient was four months old, the oldest three and three quarter years.

11. **The Treatment of Leucorrhœa with the Actual Cautery.**—Hunner speaks of the treatment of leucorrhœa, and emphasizes the necessity of being sure of the diagnosis. In a fresh case of gonorrhœal infection he warns against the use of the cautery. In acute gonorrhœa he uses first douches and later tampons, and only commences the cautery treatment after the others have failed.

MEDICAL RECORD.

January 20, 1906.

1. **Immunization in Tuberculosis with Especial Reference to the Method of Professor von Behring,**
By KARL VON RUCK.
2. **A Few Facts Concerning Cancer of the Stomach,**
By CHARLES N. DOWD.
3. **Digestive Disorders and Abdominal Pain. From the Standpoint of the Surgeon as to Gallbladder, Pancreas, and Gastric Adhesions,** By JOHN F. ERDMANN.
4. **The Distribution of Mosquitoes in the United States. As Shown by Collections Made at Army Posts, 1904-1905,**
By C. S. LUDLOW.
5. **Observations on the Use of the X Ray in the Treatment of Certain Diseases of the Skin,** By FRED. WISE.
6. **Eradicate.** By ALBERT BARNES.

2. **A Few Facts Concerning Cancer of the Stomach.**—Dowd says that it is startling to observe the frequency of gastric cancer. In 1905 there were 9,000 deaths from this disease in the United States. These deaths resulting from cancer were in proportion; 31 per cent. gastric; 16 per cent. uterine; 13 per cent. hepatic; 10 per cent. mammary; 8 per cent. abdominal; 6 per cent. of the head, neck and face, and 5 per cent. of the mouth, tongue and throat. The author thinks that unquestionable gastric cancer is a surgical disease and quotes the statistics given by Mayo and Kocher.

3. **Digestive Disorders and Abdominal Pain.**—Erdmann cites three cases to illustrate his paper on operations of the gallbladder, pancreas, and gastric adhesions. It is difficult to absolutely diagnosticate a disease invading one of the structures mentioned and chemistry of digestion and excretion should be made use of. It is well to make an exploratory examination.

4. **The Distribution of Mosquitoes in the United States.**—Ludlow reports the results from collecting and tabulating the different varieties of mosquito found in the army posts of the United States. There are three genera, anophelina, culicina, and adeomyina, which are again divided into subfamilies. The anophelina include five families, the culicina forty-nine, adeomyina having one family, the uranotœnia saphirina. The table gives also the State of the army post, including Hawaii and Puerto Rico.

5. **Observations on the Use of the X Ray in the Treatment of Certain Diseases of the Skin.**—Wise reviews the observations made on patients in the x ray department of the New York Skin and Cancer Hospital. He says that: (1) The x ray will cure ringworm and favus of the hairy skin more rapidly and reliably than any other method of treatment; the advantages of the method are, that it is painless, harmless when properly used, and thorough, and that it cuts down the expense incurred by the city in the treatment and care of these patients to a very considerable extent. (2) Hypertrichosis should be treated with electrolysis, not with the x ray. (3) The x ray gives very satisfactory results in the various forms of cutaneous tuberculosis; in keloid, in keratoses, in infiltrated patches of chronic eczema, lichen planus, pityriasis rubra; in the tubercles, ulcers, and tumor masses of mycosis fungoides, psorospermiosis, and sarcoma. (4) X radiation relieves pruritus, burning, tingling, and pain; it decreases the discharge and foul odors of various dermatoses, often causing them to disappear completely. (5) In selected cases, radiotherapy is the ideal agent in the treatment of epithelioma and rodent ulcer.

6. **Earache.**—Bardes gives a note of warning in regard to earache, which seems to be the most painful ache, even more than child bearing. He also says that no disease is more dangerous than that of which earache is the principal symptom, it being the sign of a dangerous infection that may impair and even destroy the sense of hearing, and may even cost the life of the sufferer. For the production of an earache two things are essential: an inflamed middle ear and an exudate that presses upon the drumhead. Acute middle ear trouble usually occurs in the course of an acute infectious disease, such as scarlet fever, measles, pneumonia, or grip. An acute attack mostly begins with fever. The ear throbs and feels full, pain is felt, dizziness, nausea, and annoying noises are also complained of. The only satisfactory way to find out the true condition of the middle ear, especially in children, is by means of the ear speculum. The bowels are to be kept open, and a single dose of morphine given to insure rest and comfort. Dry heat or an ice bag can be applied to the ear. Every three hours the ear should be gently irrigated with a hot solution of bichloride, 1 to 5,000, after which a few drops of a 12 per cent. solution of carboglycerin can be instilled. The author warns against such home remedies as onion, oil, etc. If necessary, the drumhead must be incised under a local anæsthetic, nitrous oxide, or chloroform.

BRITISH MEDICAL JOURNAL.

January 6, 1906.

1. The Medical Aspects of Carcinoma of the Breast, By W. OSLER.
2. Three Cases of Arterial Disease, By T. C. ALBUTT.
3. The Action and Uses of Digitalis in Cardiac Failure, By J. M. BRUCE.
4. A Clinical Study of Lepra Ophthalmica, with a Descrip-

tion of Cases Examined at the Leper Hospital in Langarues, Iceland, in 1901 and 1904,

- By K. GROSSMAN.
5. An Investigation of the Mechanism of Condylotomy for the Cure of Genu Valgum (Reeves's Operation), By W. C. STEVENSON.
6. The Influence of Acid on Guinea Worm Larvæ Encysted in Cyclops, By R. T. LEIPER.

1. **Cancer of the Breast.**—Osler considers carcinoma of the breast from the physician's standpoint. He sees the cases either at the very outset, or as victims of the late internal metastases. It must always be borne in mind that extensive general lesions may be associated with a small latent carcinoma. In two thirds of the cases both breasts have been involved. Direct extension through the chest walls to the pleura with secondary involvement of the lymphatic glands, more rarely disease of the lung itself, is one of the most common of the sequelæ of carcinoma of the breast. Pleurisy with effusion may come on insidiously with the only symptom an increasing shortness of breath. In other instances, there are severe pains with signs of involvement of the pleura itself by extension. It is not always easy to say whether the pleurisy is of a cancerous nature or not. Glandular metastases within the thorax are very common and associated with all the distressing pressure symptoms of tumor. There may be no local recurrence and no physical signs, though, as a rule, the mediastinal tissues are involved and there is flatness on percussion and not infrequently disease of the sternum itself. The glands above the clavicle may be enlarged. Even a mediastinal growth with penetration of the manubrium may undergo involution. Carcinoma of the lungs secondary to that of the breast is very infrequent. The peritonæum may be involved by direct extension and recurring carcinomatous ascites is not uncommon. The breast tumor may be latent in these cases, or concealed by the patient. Metastases to the liver is more frequent than to any other organ, but it is more commonly of post mortem than of clinical interest. The liver becomes enlarged, irregular, nodular, and the patient is deeply jaundiced, with all the features of secondary carcinoma. Cerebral symptoms may be caused either by metastasis to the bones of the skull or to the brain itself. The most common and the most serious, as entailing a maximum of suffering, are the lesions of the spine. Such metastases occur with great frequency, and they are more common in the atrophic form of scirrhus of the breast. Kyphosis is rare, and any part of the spine may be involved. The secondary growths may become sclerotic and shrink with a diminution in the pressure symptoms. The symptoms usually occur in two stages. In the first or neuralgic stage, indefinite pains in the back begin to appear from two months to two years after the removal of the cancer. There is general anæsthesia, and the patients are often thought to be neurasthenic. An attack of shingles is a distressing and not uncommon complication of this stage. The pains gradually become more severe, and may occur in the most agonizing crises. In most cases the second or paralytic stage is reached, a pressure paraplegia, usually of the spastic type. Cramps in the muscles are common, and finally there is the well known picture of paraplegia dolorosa. Spontaneous involution of the secondary tumors is one of the most remarkable features of carcinoma. Metastases to the bones are not infrequent. The bones of the hands and feet are not often involved. And finally the author urges that in the hopeless cases morphine, enough morphine, affords the only possible relief.

3. **Digitalis in Cardiac Failure.**—Bruce's conclusions with regard to the actions and uses of digitalis in cardiac failure are as follows: Digitalis is a diuretic in cardiac dropsy. Such diuresis produced by ordinary doses of the pharmacopœial preparations of the drug does not make its appearance before the third or fourth

day of administration. Digitalis to be useful in cardiac dropsy must be given in full doses; when it fails to produce diuresis it must not be abandoned, but it must be given in larger doses. The small regular pulse which is met with in cases of cardiac failure under treatment with digitalis is the effect, not of an excessive, but of an insufficient dose, and instead of being a contraindication is an indication for its continued administration in larger doses. The change in the characters of the pulse, particularly the reduction in its frequency, in response to digitalis precedes the appearance of diuresis, and persists after its disappearance. In conclusion the author insists on the importance of measuring the urine in these cases. Its volume is a ready, accurate, and sufficient index, both of the patient's condition and progress, and of the value and usefulness of the remedies used.

4. Ophthalmic Leprosy.—Grossmann's article is based on the observation of eighty cases of leprosy seen at the leper hospital in Iceland. In Iceland the nodular form of leprosy is both more frequent and more severe than the nervous or anæsthetic form; likewise, the progress of the disease is more rapid and more pernicious in the nodular form, both generally and as far as ophthalmic leprosy is concerned. In the nodular form the eyes become specifically affected in all cases, provided the patients live long enough, whereas in anæsthetic leprosy the eyes may remain unaffected. The nodular form of leprosy generally affects the annæxa first, supercilia and lids, and attacks the eye itself later, though the eye may be affected while no nodular infiltration of the lids is present. When the eye itself is the seat of the leprosy infiltration, the appearance is most characteristic. The pericorneal region of the sclera generally in one quarter or one half its circumference become a pale grayish yellow color, quite anæmic, and the slightly translucent and raised part looks like ivory. This infiltration has a tendency to spread so as to surround the whole cornea. Great relief can be given in individual cases by treating the various disturbances symptomatically. The spread of the leprosy infiltration can be retarded, if not arrested, in a certain direction by the creation of a barrier of cicatricial tissue, such as is produced by a corneal or pericorneal incision.

6. Guinea Worm.—Leiper has observed that when a dilute solution of hydrochloric acid is added to water containing larvæ of *Filaria medinensis* encysted in a cyclops, the larvæ which were formerly totally quiescent, become very active. The cyclops is killed, and the larvæ burst out of their cysts into the general body of the cyclops, and eventually reach the exterior. Here they swim about with great rapidity for hours. Dracunculiasis or guinea worm disease is due to infection with the larvæ of *Filaria medinensis*, the cyclops acting as the intermediate host. The author suggests that the larvæ are introduced while still in a quiescent state in the body of cyclops into the stomach of the human host, whence, on being set free by the action of the hydrochloric acid of the gastric juice, they proceed to their further development within the body.

LANCET.

January 6, 1906.

The Sanatorium and the Treatment of Pulmonary Tuberculosis:

1. The Therapeutic Value of the Treatment of Consumption on Sanatorium Lines, By Sir R. D. POWELL.
2. The Sanatorium Treatment of Pulmonary Tuberculosis. By Sir W. H. Broadbent.
3. On the Objects and Limitations of Sanatoria for Consumptives, By C. T. WILLIAMS.
4. The Therapeutical Value of Sanatorium Treatment in Pulmonary Tuberculosis, By J. K. FOWLER.
5. The Sanatorium Treatment of Pulmonary Tuberculosis, By F. J. WETHERED.
6. The Economic Value of Sanatoria, By A. LATHAM.

7. Sanatoria for Consumptives, By F. R. WALTERS.
8. A Medley of Surgery, By E. E. GOLDMANN.
9. A Case of Ochronosis, with a Note on the Relationship of Alkaptonuria to Ochronosis, By F. M. POPE and A. E. GARROD.
10. A Case of Operation on the Vestibule for the Relief of Vertigo; Together with a Description of the Flap Employed in Order to Obtain a Better View of the Parts During Operation; with Remarks on the History of the Operation, By R. LAKE.

1, 2, 3, 4, 5, 6, and 7. The Sanatorium and the Treatment of Pulmonary Tuberculosis.—The *Lancet* sent to a group of recognized authorities on the treatment of pulmonary tuberculosis the following list of questions on which the medical profession and through them the public, require enlightenment: 1. Has experience demonstrated the therapeutical value of the sanatorium treatment generally? 2. Are successful results obtained equally (a) in well to do patients; (b) in the working classes? 3. In the working classes must an elaborate system of insurance be combined; and are convalescent homes necessary to prolong the treatment? 4. What are the arguments for believing that the educational value of sanatoria will be great and widespread? 5. Sanatoria are considered by some people as places where severe cases may be segregated and by others as places where incipient cases may be cured. Ought there to be two sets of buildings? 6. What is a medical officer to say when he is asked whether a country authority or a private philanthropist is doing the best for the tuberculous by building a costly sanatorium? The writers of the various papers are in accord regarding the great therapeutical value of the sanatorium treatment of pulmonary tuberculosis. The results obtained among the poor are not so good as among the rich, for the reason that the former have not the recuperative powers of the well to do, and because they are usually forced to return to the conditions and surroundings in which they contracted the disease, with the result that they speedily relapse. Some system of provision for the family of the consumptive workingman while he is undergoing treatment should undoubtedly be made. In well conducted sanatoria the patients are impressed with the importance of free ventilation night and day, of suitable feeding, and of destruction of expectoration; in a large proportion of the cases these instructions are to some extent carried out on their return home. Incipient and advanced cases should be separated. The former, under certain restrictions, should lead a more or less active out of door life; the latter should be isolated and removed from dwellings and surroundings in which there are foci for dissemination of the disease. Sanatoria provided by public authority or by public contributions, ought to be of the simplest possible character. A private philanthropist may be allowed to choose what form his sanatorium take on condition that he endows as well as erects it. Fowler states briefly the lines along which cases of pulmonary tuberculosis should be handled as follows: 1. Every general and every special hospital for diseases of the chest should have a tuberculosis department and be in relation with a sanatorium. 2. A register should be kept of all patients suffering from pulmonary and other forms of tuberculosis and the patients should be classified under the following headings: (a) Suitable for sanatorium treatment; (b) suitable for general or special hospital or for home treatment; and (c) suitable for public infirmary treatment. 3. The department should supply a leaflet giving instructions to patients as to the proper method dealing with the sputum and also provide them without charge with a portable spittoon and the necessary disinfecting solutions. 4. It would be the duty of the almoner to visit the homes of the patients in order to ascertain if other inmates were already infected and by kindly persuasion and advice to induce them to submit to treatment and

to take the necessary measures for preventing the further spread of infection. 5. Compulsory notification of tuberculosis throughout the country by hospitals and such other agencies as could be enlisted in the work. They should collect information as to the existence of centres of infection and thus help to check the spread of the disease. 6. No efforts should be spared to procure the admission to sanatoria of patients in the early stages of the disease, in which stage alone in dealing with the poor it is likely that economic results—i. e., complete arrest with ability to work—will be obtained. 7. The cases must be selected by competent medical men. Wethered states that the educational powers of the sanatoria may prove useful by stilling the alarm that is gradually rising in the public mind in reference to the infectivity of pulmonary tuberculosis. In his opinion the sanatorium is destined only to play a subsidiary part in the attempt to stamp out tuberculosis. As regards prophylactic measures, segregation of advanced cases would prove more effectual. Certainly patients with advanced disease should not occupy the same buildings as incipient cases.

9. **Ochronosis.**—Pope and Garrod report a case of this rare condition occurring in a woman aged forty-seven years. The patient was suffering from a large leg ulcer and discoloration of the skin. The face was colored a dark brown, inside the lips were patches of blackish discoloration, and the ears and hands presented a bluish appearance. There were signs of a cavity at the apex of the right lung and the patient was much emaciated. The urine was almost black in color. Gangrene of the toes came on and the patient died in a few days of exhaustion. The case is the eleventh reported of the disease and the first from England. All the cases had black coloration of the cartilages, and five had black urine. The condition, for it hardly amounts to a disease, is one that is associated with the degenerative period of life. Almost all the patients had suffered from wasting diseases or disorders that had profoundly affected the general body metabolism. It seems probable that the fibrous tissues, cartilage included, are able to act as a filter, and to retain a certain pigment which is circulating in the blood and the nature of which is unknown. When the pigment is confined to the cartilages and the urine is clear the nature of the case is apt to be overlooked.

BERLINER KLINISCHE WOCHENSCHRIFT.

December 18, 1905.

1. The Colloidal Proteids in the Urine (*to be concluded*),
By E. SALKOWSKI.
2. Operative Cure, Lasting Twenty-three Years, of Detachment of the Retina,
By H. COHN.
3. Pathology and Treatment of Cryptorchidism,
By M. KATZENSTEIN.
4. A New Centrifuge,
By O. THILEMAN.
5. Stricture of the Male Urethra (*concluded*),
By NEUHAUS.

2. **Detachment of the Retina.**—Cohn reports a case which he operated twenty-three years ago for detachment of the retina. He punctured the sclera, used jaborandi, a tight bandage, and kept the patient quiet on his back. At the present time vision is somewhat diminished, there is no detachment, the posterior cortex is cloudy and the optic nerve can be distinctly seen, although there is a large staphyloma posticum present.

3. **Cryptorchidism.**—Katzenstein says that functionally in the adult, an ectopic testicle is usually deficient; this is due to its abnormal position. It is also susceptible of various degenerative changes, sometimes malignant. He says that the operative treatment of undescended testicle, if uncomplicated, should be undertaken between the eighth or tenth years in preference to massage; if a hernia is also present, the operation should be done as soon as the diagnosis is made.

The author describes his operation by which the testicle is drawn down and attached to a broad flap of skin carried from the inside of the thigh to the scrotum.

December 25, 1905.

1. Inflammations of the Pancreas,
By T. BRUGSCH and F. KOENIG.
2. Pancreatic Disease in Diabetes, By F. HIRSCHFELD.
3. Treatment and Prophylaxis of Scarlatina, By CAMPE.
4. The Colloidal Proteids in the Urine (*Concluded*),
By E. SALKOWSKI.
5. New Questions in the Epidemiology of Typhoid Fever,
By KUTSCHER.

1. **Inflammations of the Pancreas.**—Brugsch & Koenig report the case of a young man who was seized with colicky pains in the region of the stomach and who had a remittent fever. As the diagnosis could not be established from the local symptoms, an examination of the fæces was made which showed a decided diminution in the absorption of fats. The pancreas was thus suspected and the subsequent operation confirmed this view. An abscess was found, opened, and recovery followed. There was at no time any glycosuria. The case shows the advantage of metabolic examination in cases of this character. The authors point to elements which speak for pancreatic inflammation which can be seen when the abdomen is opened—the fat necrosis, the exudation into neighboring organs and the extension of the inflammatory transudate.

2. **The Pancreas in Diabetes.**—Hirschfeld points out that the pancreas may show changes in mild as well as in severe forms of diabetes. He considers pancreatic diabetes as those cases in which a diminished absorption of nourishment can be proven and those in which pancreatic colics can be shown to exist before or during the course of the disease. An especial point showing the pancreas to be affected is the absence of polyuria after a large ingestion of water. Cases of a mild character associated with pancreatic colics, would, if they were severe, be accompanied by coma. Pathologically, there is an extension of a duodenal catarrh to the pancreatic ducts, which subsequently leads to calculus formation, circumscribed necrosis and atrophy of the pancreas.

3. **Treatment and Prophylaxis of Scarlatina.**—Campe reports the treatment of sixty-seven cases of scarlet fever with Marfan's scarlet fever serum, with five deaths. The serum was first used subcutaneously, later internally. The earlier in the disease it was employed, the more efficacious was its result. The effect of the serum was shown by a diminution of restlessness, of the headache and of the anginal symptoms, and an improvement in the temperature and the pulse. The serum has a prophylactic value which the author tested in 200 cases. No untoward symptoms were observed as a result of the use of the serum.

4. **Colloidal Proteids in the Urine.**—Salkowski concludes from studies he has made on substances found in the urine which were insoluble in alcohol, that the precipitate he obtained with alcohol from the dialyzed solutions, consists of at least two bodies, one richer, one poorer in nitrogen. He says that in normal urine there exists a nitrogenous carbohydrate easily hydrolysable with an acid and not affected by pytaline; a portion of it is soluble in water, a portion of it insoluble in alcohol.

5. **Typhoid Fever.**—Kutscher points out that an infected person is always the carrier of typhoid fever. There are persons, apparently, in perfect health, who are, however, chronic carriers of the typhoid bacilli, who may even show a pure culture in the fæces. This condition may extend over a long period of years and no medicinal agent has yet been discovered to free these individuals from their infective intestinal contents. The gallbladder appears to be the organ in which the bacilli live and thrive. The prophylaxis of

typhoid fever consists to-day largely in preventing these chronic carriers of infection from an opportunity of infecting food or drinking supplies.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT

December 26, 1905.

1. Hot Air Treatment of Pelvic Inflammations,
By P. JUNG.
2. Tuberculin Treatment,
By KRAUSE.
3. Brachialgia,
By H. BRASSERT.
4. Acetone for Paraffine Imbedding,
By A. BRUNK.
5. Compression of the Ureters by Tumors,
By M. NASSAUER.
6. Hebotomy,
By A. BAUEREISEN.

1. **Pelvic Exudates.**—Jung reports most encouraging results from the conservative treatment of inflammatory conditions in the pelvis. Purulent masses are first incised through the vagina, but non-purulent cases are not surgically treated. All the cases are subjected to hot air treatment by means of Polano's apparatus which derives its heat from gas. Chronic perimetritis and chronic non-suppurative parametritis are subjected to the treatment and purulent diseases of the appendages and suppurating perimetritis are similarly treated after incision and drainage. Three patients suffering from tuberculosis were subjected to the same treatment, one with excellent, one with fair, one with negative result.

6. **Hebotomy.**—Bauereisen characterizes hebotomy as a preparatory operation for birth, not as an obstetrical operation. Its main indication is a flattened pelvis with a conjugate diameter of 6.75 cm. or less. He believes the operation gives a permanent dilatation to the pelvis.

January 2, 1906.

1. The First Operation Performed in the Pneumatic Chamber,
By SAUERBRUCH.
2. Experiments Upon Anthropoid Apes with Tuberculosis,
By VON DUNGERN.
3. Toxine and Antitoxine of Fatigue, By W. WEICHARDT.
3. Acquired Photoactivity of the Tissues as a Factor in Biological Radioactive Action, By R. WERNER.
4. Psychic Influences and Cardiac Disturbances,
By L. R. MUELLER.
5. Incarcerated Hernia of an Epiploic Appendix,
By VON BRUNS.
6. The Action of Snake Poison,
By LATZE.
7. Prophylactic and Therapeutic Action of Antistreptococcus Serum,
By F. FROMME.
8. Treatment of Fibrinous Pneumonia with Roemer's Pneumococcus Serum,
By WINCKELMANN.

1. **Operation in the Pneumatic Cabinet.**—Sauerbruch describes the first operation on a human being undertaken in the pneumatic cabinet of his invention. The operation was done in the university clinic of Breslau, and was performed on a fifty-one year old man suffering from carcinoma of the cardiac end of the stomach. During the entire intrapleural manipulation, there was not the slightest disturbance noted in the pulse or respiration. The anæsthesia was good, there was no dyspnoea and no disturbance in the reflexes. During the whole operation, the lungs were of a grey rose red, showing excellent oxidation. The patient died as the result of the operation, which disclosed that the growth was far more extensive than had been supposed. Altogether sixteen patients have been operated upon, two operations on the thorax with opening of the pleura, eight on the lungs, one on the heart and five on the œsophagus.

2. **Tuberculosis in Anthropoid Apes.**—Von Dungen has experimented on the gibbon and finds that, in this animal, no difference is to be found between bovine tubercle bacilli and the species found in the human being; nor was there any difference in the pathological process evoked by these organisms. From his studies he concludes that man is susceptible to bovine tuberculosis and that every precaution against such infection must be taken.

3. **Toxine of Fatigue.**—Weichardt concludes that the proteid molecule has the tendency, at the beginning of its disintegration, to split up into toxic substances with the formation of byproducts which have important physiological and pathological properties. This genuine toxine does not disappear under simple chemical combinations, but forms antibodies (an anti-toxine) which act against the toxic products of disintegration.

7. **Antistreptococcus Serum.**—Fromme, in a lengthy article, considers the prophylactic and therapeutical use of antistreptococcus serum. Beginning cases of peritonitis, five in number, showed immediate improvement. In other cases, drainage was simultaneously instituted. Cases of puerperal pyæmia and septicæmia showed no improvement under the use of the serum. Good results may be expected from the early use of the serum in beginning cases of streptococcus infection, such as endometritis and postoperative peritonitis, in the latter especially when accompanied by invasion and drainage.

8. **Roemer's Pneumococcus Serum.**—Winckelmann has tried this serum in cases of fibrinous pneumonia. He says its action is in all likelihood not harmful. Its curative action is, however, not to be depended upon, although its value is recognizable, especially in some of the severer cases.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

December 24, 1905.

1. An Unusual Termination of a Tuberculous Mesenteric Lymphadenitis,
By GHEDINI.
2. Regurgitation in the Gastroenterostomy of Roux,
By AMBROGIO FERRARI.
3. The Treatment of Prepatellar Bursitis,
By GIUSEPPE STELLA.
4. Observations on the Use of Ferriprotin, Roche, in the Treatment of Some Diseases of Children,
By G. NELLI.
5. The Use of Hæmoantitoxine in Pregnant and Puerperal Women,
By GULIELMO DE PAOLI and UBALDO DE BARBIERI.

1. **Tuberculosis of the Mesenteric Lymph Nodes in a Monkey.**—Ghedini inoculated a monkey with a virulent culture of tubercle bacilli, which he injected into the tonsils. The mesenteric lymph nodes of this monkey were found enlarged and infiltrated with softened tubercles. One of the glands in the mesocolon attracted special attention on account of its nodular surface and its large size. It measured five centimetres in length and three in width. It was connected by means of thick fibrous membranes with the corresponding portion of the large intestine. Upon opening the latter, its mucous membrane was found inflamed, and reddish brown on account of the presence of old hæmorrhages. A large linear ulceration was found in this region of the intestine through which a probe could be passed, and it was found that the soft and yellow substance of the gland was protruded through this fistula into the intestine when the gland was pressed upon. The intestinal wall was also thickened and contained scattered tuberculous nodules which were found to harbor numerous tubercle bacilli. This monkey had died early in the course of the infection. It is probable that in man a similar course of events takes place, and that the same mechanism obtains in the formation of intestinal ulcerations as the result of the adherence of a mesenteric ganglion to the intestine.

3. **The Treatment of Housemaid's Knee.**—Stella reports eight cases of housemaid's knee in which he employed surgical treatment. He does not favor puncture of the bursa and the injection of irritant solutions, and says that in his experience this treatment was followed by relapses. The best method of treatment is incision and drainage, which does not have the dangers of the total removal of the bursa, and yet secures a permanent

cure. The author incises the bursa and irrigates the cavity with antiseptic solutions which have the double advantage of being irritant and also removing from the cavity any granulations and blood clots that may be present. He then drains the cavity with gauze, which facilitates the healing of the sac. This gauze drain is removed every day. Finally a simple dressing without any drain will suffice. This is the case in most instances after the second or third day. If, however, inflammatory symptoms occur after the operation and the infection seems virulent, the drainage should be dispensed with and simple antiseptic solutions may be used until the inflammatory signs subside.

RIFORMA MEDICA

December 23, 1905.

1. A Case of Hernia of the Testicle,
By ENRICO VINCENZONI.
2. On Two Cases of Stenosis of the Œsophagus. The Importance of Radioscopy in the Study of these Stenoses (*Concluded*),
By STEFANO BARBA.
3. Biliary Cirrhoses and their Surgical Treatment (*Concluded*),
By O. CIGNOZZI.

1. **Hernia of the Testicle.**—Vincenzoni reports a case of crural hernia of the testicle—a rare affection of which he finds only twenty-two cases reported in literature. Crural hernia of the testicle may occur in one of two ways, namely, the testicle may descend along the inguinal canal and may thus reach the femoral region, or else it may directly pass through the crural ring. The affection may be acquired or congenital, and it is customary to consider only those cases as congenital in which the testicle passes through the inguinal canal before it becomes ectopic. The author warns against attempts to reduce a crural hernia of the testicle by manipulation, and advises in every case a surgical operation such as he describes.

2. **Stenoses of the Œsophagus Diagnosed by Means of the X Rays.**—Barba reports two cases of œsophageal stenoses in which he made radioscopic observations. The chief point brought out in his study is, that the ordinary methods of examination for stenosis of the œsophagus, the most important of which is the use of sounds, do not enable us to differentiate an organic stenosis of the canal from a narrowing occasioned by the pressure of tumors in the mediastinum or by other causes of compression. The presence of these causes of compression in the mediastinum is very difficult to determine by physical examination, and only the Röntgen rays enable us to make an accurate diagnosis in these cases. In the two cases reported, radioscopy showed that the stenosis in each was caused by the compression of tumors in the posterior mediastinum. In both cases the radioscopic examination was aided by the passage of a sound filled with a concentrated solution of bismuth subnitrate, or else provided with a metallic stylet.

3. **Biliary Cirrhoses and Their Surgical Treatment.**—Cignozzi presents an exhaustive study of this subject, and draws the following conclusions: The best method of treating biliary cirrhoses of the liver surgically is by means of cholecystostomy. This operation can be used in all the forms of biliary cirrhosis, inasmuch as it removes the biliary stasis, and diminishes the congestion of the liver. The operation is especially indicated in the hypertrophic form of biliary cirrhosis, with chronic jaundice, known as "Hanot's type." When the lesion of the biliary system is associated with an obstructive endophlebitis in the portal system in the liver, and when as a result there is an increased tension in this system of veins so that an effusion of fluid takes place into the abdominal cavity, the treatment must, in addition, embrace the relief of the ascites. This may be done by this surgical operation known as Talma's, in addition to the drainage of the gallbladder

mentioned above. A third operation, splenopexy, is indicated in cases of biliary cirrhosis in which the splenic tumor assumes a large size. In such cases, the implantation of the spleen into the parietes secures a collateral circulation for this organ which relieves its venous compression.

ROUSSKY VRATCH.

December 3, 1905.

1. The Plague in the Far East,
By V. G. KORENTCHEFFSKI.
2. The Treatment of Tumors of the Bladder (*Concluded*),
By N. F. LEZHLEFF.
3. The Origin of Intermittent Hæmoglobinuria Due to Cold (*Continued*),
By A. V. KHOROSHILOFF.
4. The Pathology of Gummatous Syphilis,
By Z. V. SOVINSKI.
5. On Osteomyelitis,
By A. V. GENKE.

1. **Plague in the Far East.**—Korentcheffski, of Harbin, in a brief report on the present state of the plague in Manchuria, concludes that the plague is endemic in the Far East, especially in Mongolia and the surrounding region. He further emphasizes the connection between the spread of human plague and the presence of the rodent *Arctomys bobax*, which abounds in these countries, especially in the early spring and towards the end of summer. *Arctomys bobax* belongs to the subclass of rodents of which the woodchuck, marmot, ground squirrel, etc., are members. The object of the expedition in which the author took part was especially to study an epidemic of plague attributed to these rodents. They found that the rodents die in large numbers as the result of some infection, and that following this there is a spread of an acute epidemic infection giving all the characteristics of plague. The commission which investigated this epidemic recommends the establishment of a special bacteriological station in Manchuria for the supervision of suspicious epidemics. The study of plague in Manchuria must include particularly a careful observation of the rodents of that region and not only of *Arctomys bobax*, but also of the field mice, which abound in the Steppes, and are, in fact, much more numerous than *Arctomys bobax*.

2. **The Treatment of Tumors of the Bladder.**—Lezhleff reports sixteen cases of tumors of the bladder of which ten were found to be malignant in character. In three of the latter radical surgical operations were performed, while in six the disease was so far advanced that only palliative treatment could be resorted to. Among these nonoperative cases the majority had an involvement of the trigone, so that the only operation that could be thought of was a complete resection of the bladder. This operation is very serious and does not give encouraging results. In 1904 Goldenberg collected 26 cases of complete resection of the bladder, with a mortality of 61.5 per cent. immediately after the operation, while the patients who survived were crippled for life. In Fedoroff's clinic a strict rule is that, whenever the mucous membrane at the circumference of the growth is found infiltrated, showing that the submucous coat is involved, the case must be considered as inoperable. This conservative view is justified, especially by the fact that operations in such cases do not prolong life and the patient's general condition may be improved by other means. Of the six cases of benign growths of the bladder, all were operated with excellent results, and in one instance about two fifths of the bladder was resected for very extensive papillary growths. Even two thirds of the bladder may be removed, as we know without interfering much with the function of the organ and when retention is threatened a permanent catheter can be introduced. The author believes, however, that in addition to the permanent catheter suprapubic drainage should be secured by means of a syphon tube, according to Guyon's method.

5. **The Origin of Osteomyelitis.**—Genke argues that the work of Courmont and Lesieur, in their recent publication (*Journal de pathologie et de physiologie générale*, i, 1905, 67) do not prove their contention that the staphylococcus aureus is capable of producing osteomyelitis. These French authors introduced cultures of this germ into the blood of rabbits and produced septicaemia which they mistook for osteomyelitis. Essentially these authors confirm the conclusions which Genke drew as the result of previous researches, namely, that the septicaemia of rabbits produced in this infection was manifested first by suppuration of the joints and of internal organs. The French authors certainly had not experimented on a sufficient number of rabbits, and the ages of their rabbits had been too uniform (seven to eight weeks). In these young rabbits the suppuration of the joints rapidly extends to the epiphyses, owing to the tender structure of their bony tissues. In older rabbits, however, we find that the suppurative process begins in, and in some cases is limited to the joints. The French authors, furthermore, injected cultures of the ordinary staphylococcus, and not of the germ obtained from osteomyelitis. Until they show that by the introduction of pure cultures of the staphylococcus into the blood of rabbits an infection of the bones occurs without the involvement of the joints and internal organs, they cannot assert that this germ actually can produce osteomyelitis. Until this is shown, the bacillus described by Genke, the inoculation of which actually produces special lesions in the bones without involving the joints, must be known as the bacillus of osteomyelitis.

ARCHIVES OF OTOTOLOGY.

December, 1905.

1. Communications Between the Blood Vessels in the Membranous Labyrinth and the Endosteum and Those in the Bony Capsule of the Labyrinth, By GEORGE E. SHAMBAUGH.
2. Report of a Case of Panotitis Resulting in Meningitis, with Pathological Findings, By GEORGE SLOANE DIXON.
3. Infective Arthritis Complicating Otitis Media, By WELLS P. EAGLETON.
4. Double Mastoiditis Complicated by an Intercommunicating Suboccipital Abscess, By HENRY B. HITZ.
5. Electrolysis in the Treatment of Chronic Eustachian Stenosis, By FRANK T. HOPKINS.
6. Untranslated Articles from Vol. XLII, *Zeitschrift für Ohrenheilkunde*, Abridged Translation, By ADOLPH O. PEINGST.

2. **Report of a Case of Panotitis Resulting in Meningitis, with Pathological Findings.**—Dixon narrates the history of a patient suffering from acute otitis media on the left side with a slight discharge and a reddened and somewhat swollen drum membrane. For this disease she had been treated six weeks ago. The attack had apparently run its course and she was under the care of a physician for the resultant deafness. Having been seized with great dizziness and weakness she sought admission at the hospital and died there on the sixth day. The autopsy showed that every cavity of the temporal bone was filled with pus or granulating tissues, or both. The stapes gave no evidence of caries, but it was partially dislocated and pus passing freely around it from the vestibule to the tympanum, Friedlander's pneumococcus being present. The dura was adherent to the brain on each side of the superior longitudinal fissure. There was marked purulent septemeningitis over the superior surface of both hemispheres. Upon the dura being removed from the left petrosa, pus was found and the bone was carious at that point. Pus was also in the left sigmoid sinus, the mastoid was soft and full of pus, which was also present in the internal auditory canal. The tract of infection to the meninges appeared to have been through the oval window to the vestibule, thence to the vestibular nerves and along the sheath of the seventh pair.

3. **Infective Arthritis Complicating Otitis Media.**—Eagleton describes four cases of infective arthritis, dividing them, according to Bloodgood, into: 1. Toxæmic arthritis, inflammation caused by the toxins of microorganisms where the germs do not enter the joint; 2, invasion of the joint by microorganisms; and, 3, involvement of the joint by a neighboring osteomyelitis. The prognosis of toxæmic arthritis is excellent both as regards the life of the patient and the mobility of the joint. The treatment varies according to the inflammation; it can be aspiration, or placing the joint in proper position with rest, or opening of the joint.

4. **Double Mastoiditis Complicated by an Intercommunicating Suboccipital Abscess.**—Hitz reports a case which he thinks is one of the class known as Bezold's mastoiditis, but differs from the usual form in that it travelled laterally along the underside of the occipital bone beneath the periosteum, parallel with the muscular insertion, and did not appear on the surface behind the mastoid apophysis.

Letters to the Editors.

THE INNOCUOUSNESS OF TEAK WOOD.

529 NORTH FIFTY-EIGHTH STREET,

PHILADELPHIA, January 8, 1906.

To the Editors: In the current issue of the *New York Medical Journal* is an editorial upon teak wood and the possibility of its causing a dermatitis. This I think must be an extremely rare thing. During fifteen years' experience in medical missionary work in Burma, the greatest teak producing country in the world, I never heard of a single case. I have attended to hundreds of carpenters who worked continually in teak, saw mill men, forest rangers, etc., and if teak poisoning were at all common I certainly should have seen at least a few cases. One thing should be borne in mind with reference to splinters causing suppuration. Some races in the Far East are so dirty that practically every wound suppurates, never mind how it was caused. With reference to sailors, every lascar—native sailor—invariably goes barefooted east of Gibraltar, often through the whole voyage; they holystone decks daily, and in so doing small splinters are often taken off the decks, and it is a common sight to see the men pull such splinters out of their feet, but they practically never give trouble. WILLIAM C. GRIGGS.

Proceedings of Societies.

WESTERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

Fifteenth Annual Meeting, held in Kansas City, Mo., December 28 and 29, 1905.

The President, Dr. H. D. NILES, of Salt Lake City, in the chair.

The Transvesical Operation for the Relief of Prostatism in the Aged.—Dr. CHARLES E. BOWERS, of Wichita, Kan., read a paper on this subject. He stated that more conservative and rational operations would yield better results and lower the mortality. An exact diagnosis in many cases could only be made upon suprapubic exposure of the vesical outlet. The suprapubic operation could be done with greater exactness and would yield better results than the infrapubic in morbid conditions in the male, as had been the case in the female pelvis. The suprapubic route was as rationally indicated for the relief of the above named obstructive conditions at the urinary outlet as it was in vesical calculus. The perineal operation offered only 30 per cent. of cures, with a mortality of 7 per cent., and a 50 per cent. chance of having exchanged one urinary difficulty

for another, and not infrequently a lesser for a greater one; while the transvesical operation entirely relieved all who survived it of their urinary trouble, if it was due to obstruction in and about the vesical outlet, except when it was carcinomatous in character, without sequelæ, and with the improved operative technique of to-day no greater mortality.

The controversy that was now going on relative to perineal and suprapubic prostatectomy was only a repetition of the one waged when lithotomy was undergoing its evolution. Who to-day cut for stone in the male bladder *via* the perinæum? The most essential thing to-day was to bring home the facts to the profession in general: That prostatism was due to other causes than hypertrophy of the prostate gland; that the transvesical operation for prostatism had attained a sufficient degree of perfection to be recommended to this class of pitiable sufferers, with the assurance of a cure if undertaken before the inflammatory process had reached the kidney and arrested its functional activity; that patients should not be submitted to catheterism in the future as they had been in the past until it was hopeless to interfere surgically.

Dr. HENRY T. BYFORD, of Chicago, speaking of the ætiology of enlarged prostate, thought the condition was due to some irritation; that it could not come entirely from age alone or from the sclerotic changes which occurred with age. In some cases of enlarged prostate there was doubtless a gouty diathesis, and perhaps the treatment recommended by Fletcher, of reducing the calories from 3,000 to 1,500, and perhaps dieting a little, would obviate the necessity of suprapubic prostatectomy in some cases.

Dr. JAMES E. MOORE, of Minneapolis, stated that twenty years ago or more he did his first prostatectomy suprapubically, and as it was done at that time it was a blind, bloody, and unsatisfactory operation. A few years ago, when perineal prostatectomy was suggested and practised so successfully, he took it up and had been advocating it ever since, always maintaining that there were certain patients that could be operated on better by the suprapubic route as it was done at the present time. However, in his judgment a man was not broad gauged, he did not do the best work he could do, until he performed both operations. He believed the perineal route was the choice in the vast majority of cases and by the vast majority of surgeons.

Dr. W. W. GRANT, of Denver, said he had maintained for years that in the average case the perineal operation was the more desirable one. In cases in which there were pus and hyaline and granular casts, the perineal route was indicated. In the "dirty" cases the patient could be better and more safely operated on through the perinæum; in the "clean" cases, by suprapubic cystotomy with the well known modern methods.

Dr. J. W. ANDREWS, of Mankato, Minn., believed that there were cases suitable for the transvesical route, but in the majority of instances the perineal route was the better. He had operated eleven times, with one death. One of the operations was suprapubic. He found it difficult, unclean, and was unable to get good drainage. Lack of drainage was one objection to the suprapubic route. The drainage was not and could not be so good as it was through the perinæum.

Dr. M. L. HARRIS, of Chicago, said that when one attempted to generalize from a few cases in surgery, these generalizations were always wrong. The essayist had generalized from twelve cases that the suprapubic route was the only one to be done; consequently he thought he was wrong. There were many cases in which a good and thorough operation could not be done suprapubically. There were also many cases in which the best operation could only be done suprapubically; consequently the surgeon must select the best operation for the particular case. Every case of prostatism

should be accurately diagnosticated before an attempt was made to select the method of operation, and the surgeon could only make such a diagnosis when he employed all the means at his command, and one of these was a thorough cystoscopic examination.

Some Observations on Renal Surgery.—Dr. D. W. BASHAM, of Wichita, Kan., in this paper, dealt with certain questions concerning nephropotosis and features of suppurative diseases of the kidney, and pointed out the reasons why nephrorrhaphy sometimes failed to relieve the symptoms. He discussed the desiderata necessary to make the operation a curative one. He criticized the methods in vogue, and referred to the modifications necessary to make the operation a curative procedure by fixing the kidney in a natural position and obliterating the enormous pouch resulting from the mobility of the organ. After discussing suppurative diseases of the kidney, and referring to the principal diagnostic points, operative intervention, sequelæ, etc., he reported four cases. The methods of Jacobson and Edebohls gave permanent results, so far as anchoring was concerned, but he thought the kidney was fixed too low in the loin, too far from the centre of the vertebral column, and too near the anterior wall of the abdomen. There were many operations which anchored the kidney permanently, but which were open to objection from the standpoint that the organ was not held in the natural position. Surgeons did too many nephropexies without making a thorough and painstaking effort to ascertain the conditions of the kidney, its pelvis, and the upper part of the ureter.

Dr. A. W. ABBOTT, of Minneapolis, said that in a series of over 2,000 examinations, only a very small number of kidneys could be felt beyond the limits described in textbooks, but this was not in accord with clinical experience. There were very few of these patients who presented any symptoms referable to the position of the kidney, largely due to the fact, he thought, that the upper part of the ureter fell with the falling of the kidney.

Dr. WILLIAM JEPSON, of Sioux City, Iowa, said there existed undoubtedly a range of mobility of nearly an inch to every normal kidney or, rather, a kidney that was normally placed. He believed that each case of movable kidney had to be considered by itself. A certain number of movable kidneys had to be fixed. He was not a firm believer in decapsulation of the kidney, for the reason that it had been demonstrated experimentally by many observers in Europe that if a kidney was decapsulated, in the course of three or four months a new capsule was formed, and the amount of blood supply the kidney received from the new source during the time it existed was not sufficient to properly maintain vitality.

Dr. C. W. OVIATT, of Oshkosh, Wis., said that occasionally it was necessary to operate in cases of movable kidney. If an operation was undertaken, it seemed to him that surgeons should profit by the teaching of Harris, promulgated several years ago, of obliterating the space beneath the kidney rather than trying to suspend the kidney alone by either the fibrous or fatty capsule. If one simply suspended it, undoubtedly there would be a recurrence of the displacement. The space beneath the organ should be obliterated by the Harris operation, making a new pocket of peritonæum, obliterating the space by a purse string, as Harris did.

Dr. A. E. BENJAMIN, of Minneapolis, said he had laid down three or four rules for fixing the kidney. One was when it showed evidence of hydronephrosis due to a faulty position of the kidney, or to a faulty position or kinking of the ureter, not allowing free drainage. Another was where there was enlarged kidney, congested or dilated kidney, and where it was tender. On examining such patients one could elicit pain by palpating the kidney. Another condition was where the

kidney seemed to produce obstruction of the alimentary canal, either the colon or duodenum, and accessory organs, such as the gallbladder apparatus, the common bile duct, etc. In such cases the kidney was prolapsed, adherent down in the pelvis, and the patients were troubled with obstipation, and by putting the kidney in position and relieving the adhesions the symptoms would be made to disappear partially or entirely. Patients with a dilated stomach and a diseased condition of the gallbladder, when apparently due to loose kidney, were sometimes benefited if their cases were taken early.

Carcinoma of the Descending Colon.—Dr. W. W. GRANT, of Denver, said that the rectum was the most frequent seat of intestinal cancer. The descending colon was next in order. Cancer of the stomach was more common than that of the intestines, and its progress was more rapid. Cancer of the colon was more common in men; it was not common under thirty years of age. It was primary and circumscribed. Metastasis and constriction were late occurrences. Chronic indigestion, both occasional diarrhoea and mucous discharges, were suspicious symptoms. Ulceration was of late occurrence. Floating kidney and membranous colitis might exist a long time without producing marked symptoms or seriously disturbing the health. It was less malignant than the same disease of the stomach or rectum. It was not painful until late. Stenosis was not attended with striking symptoms until obstruction was complete. Mild malignancy and late infection demanded a radical operation. More care was necessary in examination at an early period in order to detect disease. He reported a case of long duration. Typhlotomy was followed by a radical operation.

Dr. I. B. PERKINS, of Denver, had seen a woman, sixty-two years of age, about three weeks before, in whom there was a tumor in the groin in the region of the cæcum. It was supposed by the physician who had charge of the case to be an appendicular abscess. It was very hard. There was vomiting of fecal matter, and had been for twenty-four hours. He made a long incision in the right rectus, and on examination found a hard tumor, but no pus. The appendix was caught in the mass, also the ileocæcal valve and a portion of the cæcum. He resected the intestine and closed the end of the colon by the use of the Connell suture, then implanted the ileum into the upper portion of the wound. The patient did well except that there was slight leakage at the outer and upper portion of the anastomosis and a very small fecal fistula which he thought would close soon. He thought that another time he would close the ends of both guts and make a lateral anastomosis.

Dr. A. W. ABBOTT, of Minneapolis, called attention to one feature connected with cancer. He had seen two cases of intussusception in his own practice and one in the practice of the late Dr. Dunn. He thought intussusception occurred in cancer oftener of the large intestine than of the small. He had never seen a case in the small intestine, but he had no doubt it might occur. He thought it was wrong to make an immediate anastomosis in these cases, because they were the ones in which colostomy should first be made, because the condition about the cancerous area was so extreme that the parts would not unite if one attempted to sew them.

Dr. J. E. SUMMERS, of Omaha, speaking of the location of carcinoma of the large intestine, said he had found it everywhere in the large intestine, except at the hepatic flexure. In dealing with carcinoma of the transverse colon it was necessary to manipulate the gastrocolic omentum. Unless this was done with the greatest gentleness, one was apt to have a complication following the operation which might be serious, namely, hæmorrhage into the stomach. A week ago he removed the transverse colon for carcinoma, and as a result of man-

ipulation there was a serious hæmorrhage from the stomach for several days. His attention was first directed to this complication some years ago following an operation for incarcerated umbilical hernia, in which it was necessary to remove considerable portions of the omentum, and the manipulations had been very rough. The operation was proceeded with without any special difficulty, but it was followed in two hours by profuse hæmorrhage from the stomach, from which the patient died.

Dr. GRANT wished to urge one point, namely, that the symptoms of this disease were not pronounced at an early period, but when there were suspicious indications it was very important to use more care in examining these patients than the surgeon was accustomed to use. Under favorable conditions, when the bowels were thoroughly evacuated, the surgeon might discover the presence of a growth in the colon, and this was the time when an operation brought about such satisfactory results, and also it was the period when an operation could be done at one sitting.

The Choice of Ligature and Suture Material in the Surgery of the Peritonæum.—Dr. H. G. WETHERILL, of Denver, stated, among other things, that he would no longer use nonabsorbable ligature or suture material for purely serous surfaces. The absolute sterilization of catgut was no longer difficult, and it was now realized that so called catgut infections usually had their origin in a contamination of the gut by handling or in allowing it to come in contact with unclean surfaces or substances in or about the wound. Then, too, the chromicizing process prolonged the life of even the smaller strands to any desired time, provided the mucous surfaces or secretions were not in contact with it. These features made of catgut an ideal suture and ligature material for intraperitoneal use, and all that was necessary was the exercise of due care and skill in the selection of the catgut and the application of sutures and ligatures and the making of knots. So far, he had had the good fortune never to have observed a secondary hæmorrhage or other accident from the use of catgut, either in the way of a slipping knot or too rapid absorption, and he believed this immunity from accident to have been due to the exercise of extreme care in its application. For about three years he had had great satisfaction in the use of the Downes electrothermic cautery clamp in selected cases, thus doing away with all ligature and suture materials around pedicles. For vaginal hysterectomy, particularly in cancer of the uterus, it was ideal. It promoted rapidity and safety in the work, and without doubt gave much greater security against the danger of recurrences in early cases. There was in his experience and judgment no doubt that patients operated upon with the Downes clamp by either the vaginal or abdominal route had more rapid recoveries, and above all a very noticeable freedom from the intense pain and backache so common after all pelvic operations when the terminal nerves of this region were left for days or weeks in the bight of a securely tied ligature or closely applied suture. He had had one or two experiences with the Downes clamp, however, which led him to believe that there was increased danger from thrombosis and embolism after its use, occasionally occurring several weeks after the operation, and until this doubt was settled he should be most careful in the selection of the cases in which it was used.

A New Technique for Breast Amputation.—Dr. JABEZ N. JACKSON, of Kansas City, Mo., described a new technique for use in radical operations for carcinoma of the breast. The method was devised by him about eight months ago, and had since been used exclusively by him in all cases of this character with which he had had to deal. From his experience, although limited to eight cases, he believed that the

method had certain elements of advantage, as well as originality, that justified him in presenting it for a wider field of service. After describing the method at considerable length, he emphasized the following advantages: 1. The flap formed a covering for the chest defect, as a rule, without any tension, and thus almost entirely obviated the necessity of grafting, which was so frequent in other methods. In fact, he had not found any case that required grafting. This was not intended to cover cases where there had been extensive previous ulceration, or where we could not get healthy tissue for a flap of any character. 2. The drawing of the skin up to the arm did away with the fossa axillaris, and thus with the large space which nature would have to obliterate by the formation of scar tissue, with the resultant pressure upon the axillary vessels and nerves. 3. The ligation of all vessels at their nearest point of origin did away with the use of a large number of hæmostatic forceps, which caused loss of time, to say nothing of the inconvenience of having a large number of instruments in one's way. He had in no instance used more than a dozen forceps in this operation, and could usually do the work with about six. The operation was thus shortened, so that, as a rule, he found that to complete it required from forty minutes to an hour or thereabouts. In fact, personally, he had never exceeded an hour, even doing the operation slowly, as he had in most cases, for the purpose of demonstrating this new technique. He had done the operation in as short a time as forty minutes. 4. The most noticeable feature to the onlooker, when the operation was done, was the marked absence of hæmorrhage, so that it could almost be called a bloodless operation. 5. The entire technical portion of the operation was completed before the chest was exposed by the removal of the breast; therefore long exposure of an enormous area of raw surface, with the attendant shock, was done away with. As soon as the breast was removed one was ready to close the wound.

Dr. CARLES A. POWERS, of Denver, said the key to the operation described by the essayist lay in the flap which covered the large skin defect, and as such it appealed to him. He asked Dr. Jackson whether in any of the cases there had been any sloughing at the corners of the quadrilateral flap. Personally, he had been very much pleased with the procedure of Dr. J. Collins Warren, of bringing up a flap from the arm. The technique of Dr. Jackson's operation was easier, he thought, and he would certainly employ this method in the future.

Dr. JACKSON, replying to Dr. Powers, said that in some instances there had been slight sloughing at the corners of the flap. In recent cases, by using a wide Halsted mattress suture for tension, he had got union without sloughing.

Fractures About the Elbow Joint.—Dr. W. D. HAINES, of Cincinnati, said that the open method of treatment was to be commended in all cases of extensive joint involvement. After freely exploring the joint cavity, freeing it from clot, removing detached spicula, and fixing the fragments, a strip of fascia from the arm might be inserted between the joint surfaces after the method of Murphy in excision, or the Mose-tig bone filling might be used, with a view to preventing adhesions until sufficient repair had taken place to permit of passive motion. The operation was completed by suturing the capsule, fascia, nerves, and skin with ample provision for drainage. The arm should be dressed in the fully extended position, and placed on an incline, and a light weight applied. This position and dressing should be changed at the end of a week. After light massage the arm was redressed at a slight angle and permitted to remain for four or five days, when it was changed to as nearly a right angle as possible without paining the patient too severely. Subsequent treatment consisted of massage and passive mo-

tion every third day for a period of three weeks. Local pain and tenderness were given precedence over crepitus in the diagnosis. The use of weights to overcome muscular rigidity permitted of infiltration, diminished elasticity, interfering with rather than assisting in the reduction of these fractures. The proper treatment of pain and swelling accompanying fracture was early reduction and the application of extension, ice or other adjuvants being deemed advisable. Immediate amputation was reserved for those extensive crushing injuries, such as bumper wounds, in which the circulation and joint were so badly damaged as to be beyond all hope of repair. The author expressed the opinion that fractures about the elbow joint had been overtreated in the past.

Talipes Calcaneus.—Dr. A. F. JONAS, of Omaha, described a plastic operation for the permanent relief of cicatricial talipes calcaneus.

Tuberculous Peritonitis.—Dr. T. E. POTTER, of St. Joseph, spoke of the ætiology of tuberculous peritonitis, and of the symptoms and diagnosis, giving the more modern views on the subject. An early diagnosis was highly necessary, and the physician was urged to be on the alert when there were any symptoms pointing toward tuberculous peritonitis. The success in treatment at any age was much greater when the disease was recognized before it had made too extensive progress. In the treatment, the writer gave preference to surgical methods, showing that at least 66.33 per cent. or more recovered in the hands of surgeons, while not more than 33.33 per cent. recovered after treatment by the latest and most approved methods.

The Treatment of Varicose Veins.—Dr. C. H. MAYO, of Rochester, Minn., said in this paper that the various operations in use at the present time were necessary from the diverse conditions and symptoms manifested by the disease. The condition was probably from a defect in the vein walls, valves, or innervation. The Trendelenburg operation was deservedly popular, especially for cases of vicious venous circle of the deep and superficial veins of the thigh. Enucleation of the veins in a subcutaneous manner through several short incisions was a satisfactory treatment for the majority of cases. The subcutaneous removal of the internal saphenous from above at the side of and below the knee, by destroying the main superficial channel and deep communicating branches, was the best method, accomplishing in one operation all that could be obtained by either the Trendelenburg above or the Schede below. Goerlich's report showed 84 per cent. of operations as satisfactory and 16 per cent. failures. From experience in 184 cases this seemed a fair statement of the late results from the various methods employed at present, except in the proportion of failures. Sixteen per cent. was too high, as many of those not satisfactory were much improved over their former condition.

Undescended Testicle.—Dr. A. E. BENJAMIN, of Minneapolis, said that the causes of undescended testicle might be improper development of the organ, a rudimentary vaginal process, peritoneal adhesions between the testicle and bladder or intestine, and obstruction of the canal. The testicle might be found anywhere along its course of descent to a point just outside the external ring. Hernia was a common complication of this condition. The organ would not develop as well when located at any point above the scrotum. The possible sterility of the cryptorchid, and the frequency of malignant, tuberculous, and traumatic disturbances, complicating this condition, all argued for an early operation to place the gland in its proper location. The operation for undescended testicle had been perfected in the last few years. It had been demonstrated that, by careful dissection and an occasional sacrifice of the spermatic vessels, the organ would remain in the scrotum.

The Free Interval in Meningeal Hæmorrhage.—Dr. F. GREGORY CONNELL, of Salida, Col., reported two cases, one of which was quite usual, with an interval of two hours, in which recovery followed an operation. The other was one in which the patient went to bed, five hours after a slight injury, and was found dead in the morning. The autopsy revealed a fracture, with a large extradural clot from the lateral sinus. This second case was not very rare; but in eighty cases collected by the writer only two similar instances were encountered. The free interval was defined as a practically symptomless period of consciousness which followed a primary, transitory unconsciousness and preceded a secondary, increasing and permanent loss of consciousness. This condition was usually found in association with a head injury. The cause of the bleeding was usually traumatism, with or without fracture. Various causes of the free interval were considered, with preference given to Kocher's explanation. The length of the free interval was studied in an analysis of the eighty cases, the average length being thirty-five hours. The difference between extradural and intradural hæmorrhages was noted, and the long free interval in this series of cases was found to accompany the intradural hæmorrhage. But much stress could not be placed upon the length of the interval as a guide to the location of the hæmorrhage. The typical train of events in a meningeal hæmorrhage was injury; concussion, unconsciousness; consciousness, free interval; compression, unconsciousness; but this might be variously modified. In the diagnosis the focal signs were of more value than evidence of an injury. The occurrence of collateral hemiplegia must be remembered. Fractures of limbs, previous paralysis, or congenital attachment of the iris had caused confusion in diagnosis. Contusion or laceration of the brain, abscess, fat embolism, and other conditions might closely resemble meningeal hæmorrhage. In the eighty collected cases, fifty-two were subjected to operation and twenty-eight were not. After operation there were thirty-nine recoveries and thirteen deaths. Without operative interference, four recovered and twenty-four died.

The Effects of Osmic Acid Injections.—Dr. JOSEPH RILUS EASTMAN, of Indianapolis, said in this paper that the injection of ten drops of osmic acid in a two per cent. solution into sensory nerve trunks was safe. The likelihood of irritation of the kidney, however, should not be forgotten in cases of kidney lesions. Injections into the inferior dental or other nerves should not be made through the mouth, since infection of the wound and necrosis might result. Immediate relief should not always be expected, notwithstanding the fact that Bennett's and Murphy's patients were all immediately relieved. Not one of the writer's patients, even those in whom the acid was accurately injected into the nerve trunks and into the perineural fat, was promptly relieved, relief coming in from one to two weeks. The observations on this point of Wright, who had had a large experience with osmic acid injections, corresponded to those of the writer. There was very little doubt that the stretching of the nerve trunk necessarily incident to the injection was productive of good, supplementing, as it did, the action of the acid. There was no good reason why the stretching should intentionally be avoided, except perhaps for experimentation. In the case of small nerves, it would be found exceedingly difficult to inject directly into the nerve trunk; the needle eye would pass to the distal side of the threadlike nerve or perhaps not enter the nerve substance at all, or, notwithstanding the utmost care, the fibres might be so teased apart by the needle point that the fluid would simply be spilled about the nerve. In such a case, in order to bring the acid in contact with all the fibres, it was wise to clip the nerve so that the end might be bathed in the fluid. The effect of manipulation of the nerve, as by stretching, had not as yet

been eliminated as a possible aid to the chemical action of osmic acid; therefore a general anæsthetic should be administered, so that neurectasy or section of the nerve might be practised, if desired. The writer's experiments had shown no other changes in the nerve tissues as the result of injections of osmic acid than the disintegration of fat and oil globules in the perineural space and in the white matter of Schwann, such white matter being simply fatty matter in a fluid state, insulating and protecting the essential part of the nerve. The degenerations appearing in the nerve itself were only such as might be fairly attributed to nutritional changes and exposure, the indirect result of the selective action of osmic acid of destroying fat. There was no reason why this fat should not be restored and the nerve again become capable of transmitting sensation. Theoretically, the neuralgia might return after injection of osmic acid. Osmic acid injections were uncertain in effect as to the cure or relief of neuralgia. A large proportion of cases of neuralgia would be relieved for months by osmic acid injections. The injection of osmic acid for the relief of tic douloureux was quite justifiable even if it should become necessary to repeat the injections at intervals of a few months, particularly in view of the unfavorable results of the so called radical operation. The local irritation produced by the acid and the remote toxic and irritant effects were not serious in their consequences, and had no meaning as to the effect of the osmic acid in relieving neuralgia. The solution of osmic acid should be made fresh for each operation, as deterioration was rapid.

Twentieth Century Surgical Problems.—This was the title of the President's Address. No one who had kept in touch with our recent experiences in the surgery of the brain, lungs, pancreas, spleen, peritonæum, and other organs, he said, could escape the conviction that, with a clear, definite idea of the physiology of these parts, the result of surgical endeavors would be infinitely more satisfactory than we were able to obtain with our present knowledge. In brain surgery our many failures could not be charged to any lack of operative skill, but to inability to ascertain accurately the exact situation of the trouble early enough to insure a safe removal or correction. The same might be said of the morbid conditions of the spleen, of the pancreas, and in a degree of the stomach. Until we were better informed by the physiologist of the normal functions of these organs, we could not hope always to distinguish between the normal and the abnormal. The evidence that pointed to the one and excluded the other could come to us only through concentrated specialized efforts which the average surgeon was technically unfitted to undertake. The line that divided surgical diseases from nonsurgical was still somewhat vague and indistinct, and one of the most common sources of error in treatment arose from the fact that we were often in doubt as to when and how far we might safely trust to the reparative resources of nature, and under what conditions prompt operative intervention should be resorted to. Thus far, success in surgery had been measured largely by the ability to cope with advanced disease after it had become an immediate menace to life and health. But the time could not be far distant when the importance of recognizing the antecedent pathology of cancer, ulcer, surgical kidney, pyosalpinx, prostatitis, and many other grave lesions would be impressed upon the profession, and the public would be educated to choose preventive rather than last resort surgery. If we were ever to solve the problems that baffled our endeavors to-day, and place surgery upon a much higher plane than it now occupied, scientific workers must become more practical, practical workers must become more scientific, and physicians and surgeons must become more nearly united in their ideas of pathology and treatment. And this could be accomplished only by an

organized movement tending to bring all workers into closer touch and sympathy with one another.

(To be concluded.)

New Inventions.

SPLIT FIGURE OF EIGHT BANDAGE.

By FREDRIC GRIFFITH, M. D.,

NEW YORK.

To enable me to apply the minimum amount of bandage in an infected toe case, in a patient forced to continue at work, I devised the method of applying a figure of eight, as pictured in the cuts, made



FIG. 1.—Split figure of eight bandage.

from a yard length of an inch roller bandage that for the toe was looped about the member after a small quantity of gauze wound dressing had been applied. The inner tail was drawn through a longitudinal opening one inch long (made by snipping with scissors).



FIG. 2.—Split figure of eight bandage applied to the little toe.

After gently drawing taut the bandage ends were tied so as to bring the knot under the outer maleolus. I have known this bandage to keep its position upon the foot for a week at a time without losing its "set" or becoming distorted. Carrying out the same principle, a similar bandage may be applied to the fingers or thumbs. When used for the inside digits one complete turn before passing the tail through the eye is advised. Made from a three or four inch width roller, light dressings may

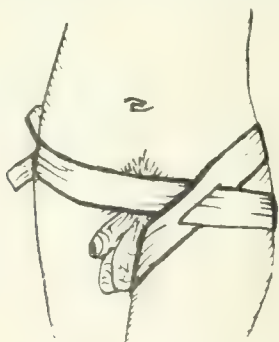


FIG. 3.—Split figure of eight bandage applied to the groin.

be applied to the groin spaces and to the axilla and neck regions.

Regarding the toe areas, I claim for the bandage, applied as has been described, comfort for the afflicted ones required to wear shoes during treatment; for the others, economy and expediency.

49 EAST SIXTY-FOURTH STREET.

Book Notices

Technique du traitement de la luxation congénitale de la hanche. Par le Dr. F. CALOT, Chirurgien en chef de l'hôpital Rothschild, de l'hôpital Cazin-Perrochaud, etc. Avec 206 figures dans le texte et 5 planches (en photocollographie). Paris: Masson et Cie., 1905. Pp. 293.

This brochure is based upon the independent study of nearly 500 manual replacements. The author shows that patients can be successfully treated up to fifteen years of age and older. His procedure differs materially from that of the Vienna school, as great stress is laid on preliminary traction in difficult cases, and the patients do not walk in their casts. Reduction of the head of the bone is effected by manual traction of the flexed thigh and pressure over the trochanter, with or without abduction or adduction. The position of choice for retention is 70° of thigh flexion and 70° of abduction, as in this position the femoral head is opposed to the acetabular cup. This position is maintained for three months and a half, when the leg is brought down straight and inverted, and so held for six or eight weeks.

The author reports ninety-seven stable anatomical reductions in his third hundred, and one hundred in his fourth. The reviewer can only say that he knows of no other surgeon who has been equally fortunate.

A Textbook of Physiology. By WINFIELD S. HALL, Ph. D., M. D. (Leipzig), Professor of Physiology, Northwestern University Medical School, Chicago. Second Edition. Philadelphia and New York: Lea Brothers & Co.

There are few if any works on physiology in English that so amply correlate this subject with the phenomena of disease and the problems of clinical medicine as Professor Hall's admirable book. Thoroughly up to date, it presents in a comprehensive and at the same time concise form, the fundamental facts of the science and its latest developments. The traditional ultrascientific presentation of this subject has not succeeded in awakening in the student a realization of its vast importance from the viewpoint of his future needs. Every phase of the subject of physiology should have joined to it in the student's mind the way in which it is related to the various phenomena of disease. This not only serves to aid the memory, but also helps the student to assimilate facts which he might otherwise be tempted to disregard.

From the didactic viewpoint this book is unexcelled. Each topic is introduced with a general discussion of the physical and chemical principles involved. The book is replete with diagrams, colored plates, and histological drawings. It is impossible to do justice to the work by referring to any single topic and the manner in which it is handled. A brief enumeration of some of the more salient of its features may serve to convey some idea of this modern method of teaching physiology. The subject of digestion is introduced, with a brief description of the fundamental carbon compounds and with their graphic formulæ. The latest chemical studies of digestion made by Pawlow, the investigations of the movements of the stomach and intestines by means of the Röntgen rays made by Cannon, the various pathological and clinical aspects of digestion, together with a comprehensive bibliography, are included in the thorough treatment of this im-

portant subject. Under the physiology of the nervous system, the classification of the reflexes and their description, including that of those that are important from the clinical point of view, such as Babinski's reflex, are particularly helpful. To the general practitioner who wishes to replenish his mind with the most advanced views and the latest discoveries in physiology, and who wishes to remodel some of his vague conceptions of disturbed functions, a perusal of Hall's work will prove at once an edification and an agreeable diversion.

Miscellany.

Some of the Fallacies in the Clinical Diagnosis of Gonorrhœa.—In a discussion of some of the more dangerous of the fallacies in the diagnosis of gonorrhœa, with special reference to prognosis as regards the infectiousness of a given individual to other and healthy persons with whom he or she may come in sexual contact, G. F. Lydston (*St. Louis Medical Review*, October 28, 1905), states that the first point is the possibility of excluding infectiousness in the case of a woman under suspicion, or who is known to have gonorrhœa. That the most dangerous type of infection of the female is that in which the external manifestations of the disease are absent or wanting is coming to be well understood by both gynæcological and genitourinary specialists. The explanation of the relatively great danger of infection of others by such subjects is not so thoroughly understood as it should be. Gonorrhœal urethritis in the female, when it has assumed the chronic form, may present no secretion whatever upon external examination. There may be little or no vaginal, cervical or uterine discharge, and even such as there is may, upon examination, fail to disclose the microorganisms of gonorrhœa. A swab or probe passed into the vagina may return perfectly clean. Notwithstanding this apparent lack of infection in the vagina, the mucous glands may be involved, and under the influence of sexual excitement and the mechanical effect of coitus, the physiological hypersecretion may convey to the meatus gonococci in abundance. The result is sufficiently obvious. The author presents clinical facts which would seem to make it impossible for a physician to say in a given case that a woman is free from infection. This is one of the strongest arguments against the regulation and medical inspection of prostitutes in the judgment of the author. He entertains serious objections to the medical profession constituting itself an assurance society for the protection and promulgation of the social evil; but aside from this scruple, there remains the fact that no reliable system of inspection or examination can be devised. The author claims that in many cases of infection of healthy women by a latent gonorrhœa of the husband, mixed infection is responsible, and the resulting pathological condition in the female is non-specific. It being non-specific, however, does not preclude the possibility of it becoming very serious. The author states that the physician should be as chary of assuming responsibility in advising a gonorrhœic in the matter of matrimony as he should be in advising syphilitics under similar circumstances.

Characteristics of the Filipinos in the Acceptance of Medical Treatment.—The total number of deaths, including transients, in the city of Manila for the year ended August 31, 1904, was 11,357, of which 6,029 were infants under 1 year of age. While a high death rate among infants is found in all tropical countries, it cannot be ascribed to the climate alone. In the Philippine Islands the primary cause is the lack of knowledge of the proper care and feeding of young children and

to the difficulties of obtaining suitable food in cases where it is necessary to supplement the natural food by resorting to "artificial feeding." Into all the larger towns of the Archipelago the germ-infected nursing bottle has found its way, but fortunately it has not yet become an important factor among the causes of infant mortality. It is almost impossible to obtain fresh cow's milk, so the milk of the carabao and the goat is used. The poor people, especially in the provinces, cannot avail themselves of ice, therefore it is impossible for them to preserve the milk in a fresh state, and it is often fed to infants after it has become sour. They know nothing of the necessity for making it conform as nearly as possible to breast milk nor of the importance of protecting it from flies. Throughout the islands dishes are washed in cold water, and the nursing bottle, if in use, is treated in the same way, if it is fortunate enough to be washed at all. On account of the destructive epidemics of rinderpest which have destroyed the cattle, many of the goats have been sacrificed for food, so it is necessary to use condensed milk, and, oftentimes, in the provinces, the milk of the cocoanut, for feeding infants. The ignorant classes do not understand why water taken from a stream in which people bathe and wash their clothes, when used to dilute milk, should cause intestinal disorders, or why an unclean cloth used in dressing the umbilical cord should infect the child. The Filipino people are fond of their children, and, like the Chinese, they consider it an honor to have large families. Such a thing as an induced abortion or miscarriage is very rare. The native physicians have displayed great interest in the circulation of the Board of Health Bulletin No. 3, mentioned elsewhere, entitled "The Care of Infants." It is sincerely hoped that much good will be accomplished through its influence, but it will require time and a carefully conducted campaign of education to overcome the present conditions.—*Annual Report of the Commissioner of Public Health, Philippine Islands, for 1903-1904.*

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera and plague, have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the week ended January 19, 1906.

Smallpox. United States.			
Places.	Date.	Cases.	Deaths.
California—Imperial and vicinity.	Jan. 5.	7	2
California—San Francisco.	Dec. 23-30.	4	1
Delaware—Wilmington.	Jan. 6-13.	1	0
Dist. of Columbia—Washington.	Jan. 6-13.	4	1
Florida—Jacksonville.	Jan. 6-13.	3	1
Florida—Mascotte.	Jan. 6-13.	1	0
Florida—West Palm Beach.	Jan. 6-13.	1	0
Florida—Oviedo.	Jan. 6-13.	1	0
Florida—St. Petersburg.	Jan. 6-13.	7	1
Illinois—Chicago.	Jan. 6-13.	1	0
Indiana—Lafayette.	Jan. 1-8.	1	0
Louisiana—New Orleans.	Jan. 6-13.	6	0
Maryland—Baltimore.	Jan. 6-13.	5	0
Missouri—St. Louis.	Jan. 6-13.	2	0
New York—Buffalo.	Jan. 6-13.	1	0
New York—New York.	Jan. 6-13.	12	0
Ohio—Cincinnati.	Jan. 5-12.	3	0
Ohio—Dayton.	Jan. 6-13.	1	0
South Carolina—Camden.	Jan. 6-13.	1	0
Washington—Spokane.	Dec. 1-31.	2	0
Wisconsin—Appleton.	Jan. 6-13.	1	0
Wisconsin—La Crosse.	Jan. 6-13.	1	0
Smallpox. Foreign.			
Brazil—Pernambuco.	Nov. 15-Dec. 15.	80	0
Brazil—Rio de Janeiro.	Dec. 3-10.	1	0
Chile—Iquique.	Dec. 2-9.	20	6
France—Paris.	Dec. 23-30.	13	0
Gibraltar.	Dec. 18-24.	8	1
Great Britain—Cardiff.	Dec. 23-30.	1	0
India—Bombay.	Dec. 12-19.	2	0
India—Karachi.	Dec. 16-17.	4	0
India—Madras.	Dec. 9-15.	5	0
Italy—General.	Dec. 21-28.	26	0
Italy—Palermo.	Dec. 16-23.	2	0
Russia—Odessa.	Dec. 9-16.	9	1
Russia—St. Petersburg.	Dec. 3-9.	6	0

Yellow Fever.				
Brazil—Rio de Janeiro	Dec. 3 10	7	1	
Cuba—Havana	Dec. 30 Jan. 16	2	2	
Mexico—Veracruz	Dec. 23 30	1	1	
Nicaragua—Managua	Dec. 9 16	1	1	
Cholera Insular				
Philippine Islands—Manila	Nov. 18-Dec. 2	5	4	
Cholera—Furciosa				
India—Madras	Dec. 9 15		8	
Russia—Touza District	Dec. 7 17	4	4	
Russia—Mazow	Dec. 7 17	11	4	
Russia—Ostrow	Dec. 1 17	3		
Plague Insular				
Philippine Islands—Manila	Nov. 18-Dec. 2	1	1	
Plague—Furciosa				
Brazil—Pernambuco	Dec. 1 15		2	
Brazil—Rio de Janeiro	Dec. 3 10	7	6	
India—General	Nov. 18-Dec. 16	11,376	8,801	
India—Bombay	Dec. 2 17			
India—Karachi	Dec. 10 17	6	6	

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending January 17, 1906:

- BURKHALTER, J. T., Passed Assistant Surgeon. Granted leave of absence for one month from January 24, 1906.
- CLARK, TALIAFERRO, Passed Assistant Surgeon. Directed to proceed from Philadelphia to Easton, Pa., for special temporary duty, upon completion of which to rejoin station.
- COFER, L. E., Passed Assistant Surgeon. Granted leave of absence for twenty days from January 19, 1906.
- GIBSON, L. P., Acting Assistant Surgeon. Granted six days leave of absence from January 16, 1906.
- HOLT, J. M., Passed Assistant Surgeon. Granted leave of absence for two months from January 15, 1906, on account of sickness.
- KING, W. W., Passed Assistant Surgeon. Relieved from duty at San Juan, P. R., as Chief Quarantine Officer, and directed to proceed to Washington, reporting at the Bureau for orders.
- RICHARDSON, T. F., Passed Assistant Surgeon. Granted leave of absence for seven days from January 13, 1906.
- STEARNS, W. L., Pharmacist. Granted seven days leave of absence from January 13, 1906, under the provisions of paragraph 210 of the regulations.
- STIMPSON, W. G., Passed Assistant Surgeon. Granted leave of absence for one month from January 15, 1906.
- WILLIAMS, L. L., Surgeon. Directed to proceed to Wilmington, N. C., for the purpose of making an inspection of the station.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 20, 1906:

- BARNEY, CHARLES N., First Lieutenant and Assistant Surgeon. Assigned to duty at the General Hospital, Fort Bayard, New Mexico.
- BOURKE JAMES, First Lieutenant and Assistant Surgeon. Relieved from further duty at Fort Sheridan, Ill., and from temporary duty at the Medical Supply Depot, New York, N. Y., and assigned to duty as transport surgeon on the *Kilpatrick*.
- CLARK, JOHN A., First Lieutenant and Assistant Surgeon. Leave of absence extended thirty days.
- DARNALL, CARL R., Captain and Assistant Surgeon. Appointed a member of a board of medical officers of the Army and of the Navy, to consider improvements in the first aid dressings and uniformity of equipment for the Medical Departments of the two services. The board will meet in Washington, D. C., at such a time as shall be designated by the Surgeon General of the Army.
- HAVARD, VALERY, Colonel and Assistant Surgeon General. Appointed a member of a board of medical officers of the Army and of the Navy, to consider improvements in the first aid dressings and uniformity of equipment for the Medical Departments of the two services. The board will meet in Washington, D. C., at such a time as shall be designated by the Surgeon General of the Army.

KIRKPATRICK, THOMAS J., First Lieutenant and Assistant Surgeon. Having arrived at San Francisco, Cal., will proceed to Fort Moultrie, S. C., and report for duty.

LYNCH, CHARLES, Captain and Assistant Surgeon. Appointed a member of a board of medical officers of the Army and of the Navy, to consider improvements in the first aid dressings and uniformity of equipment for the Medical Departments of the two services. The board will meet in Washington, D. C., at such a time as shall be designated by the Surgeon General of the Army.

MONCRIEF, WILLIAM H., First Lieutenant and Assistant Surgeon. Having arrived at San Francisco, Cal., will proceed to Fort McPherson, Ga., and report for duty.

SCOTT, GEORGE H., First Lieutenant and Assistant Surgeon. Relieved from duty in the Army Transport Service, and ordered to Fort Duchesne, Utah, for duty.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending January 23, 1906:

- BARBER, G. H., Surgeon. Detached from the *Ohio* and ordered to the *Wisconsin*.
- BEYER, H. G., Medical Inspector. Detached from the *Wisconsin* and ordered to the *Ohio*.
- BUCHER, W. H., Surgeon. Detached from the *Cincinnati* and ordered to the *Lawton*.
- PAGE, JOHN E., Passed Assistant Surgeon. Ordered to the *Franklin*, Norfolk, Va.
- THOMPSON, J. C., Surgeon. Detached from the *Lawton* and ordered to the *Cincinnati*.

Births, Marriages and Deaths.

Married.

BERLIN—JAFFE.—In Philadelphia, on Saturday, January 13th, Dr. Lewis Berlin, of Norfolk, Va., and Miss Pauline Jaffe.

Died.

- BECK.—In Vineland, New Jersey, on Thursday, January 18th, Dr. J. L. Beck.
- BOWERS.—In Westfield, N. Y., on Wednesday, January 10th, Dr. John N. Bowers.
- BURNETT.—In Washington, D. C., on Thursday, January 18th, Dr. Swan M. Burnett, aged fifty-eight years.
- CHARTIER.—In Biloxi, Mississippi, on Monday, January 8th, Dr. M. E. Chartier, aged fifty-one years.
- CHISMORE.—In San Francisco, on Thursday, January 11th, Dr. George H. Chismore, aged sixty-seven years.
- COOKE.—In Chicago, on Monday, January 8th, Dr. A. H. Cooke, aged eighty-one years.
- COOPER.—In Trenton, New Jersey, on Wednesday, January 17th, Dr. Isaac Cooper.
- DENT.—In New York, on Friday, January 12th, Dr. Emmet Cooper Dent, aged forty-eight years.
- HERSEY.—In Boston, on Friday, January 12th, Dr. Artemas L. Hersey, of Oxford, Maine, aged eighty-two years.
- HILL.—In Hopkinsville, Kentucky, on Monday, January 15th, Dr. William M. Hill, aged seventy-eight years.
- HOARE.—In Hornellsville, N. Y., on Monday, January 8th, Dr. Joseph D. Hoare, aged forty years.
- MCGRONEN.—In Brooklyn, N. Y., on Friday, January 12th, Dr. Harry A. McGronen, aged thirty-five years.
- NEFTL.—In New York, on Saturday, January 20th, Dr. William B. Neftel, aged sixty-one years.
- PEARCE.—In Pawling, N. Y., on Saturday, January 6th, Dr. Henry Pearce.
- PERRY.—In Bucksport, Maine, on Tuesday, January 9th, Dr. Frank Parker Perry, aged fifty-five years.
- RUSSELL.—In Poughkeepsie, N. Y., on Wednesday, January 10th, Dr. Selwyn A. Russell, aged fifty-one years.
- STONER.—In Clifton Springs Sanitarium, N. Y., on Tuesday, January 9th, Dr. William B. Stoner, aged sixty years.
- YOUNG.—In Riverhead, Long Island, N. Y., on Thursday, January 18th, aged forty-four years.

New York Medical Journal

INCORPORATING THE

Philadelphia Medical Journal and The Medical News

A Weekly Review of Medicine

VOL. LXXXIII, No. 5.

NEW YORK, FEBRUARY 3, 1906.

WHOLE No. 1418.

Original Communications.

THE MEDICAL MANAGEMENT OF NEPHRITIS.*

By JAMES TYSON, M. D.,
PHILADELPHIA.

The medical management of nephritis is an extensive subject, too large to permit its exhaustive consideration on an occasion like the present. My remarks must therefore be very general. The indications are evident, viz., to restore the kidney to its structural integrity and to remove the dangers to life growing out of the morbid changes in the organ. Their fulfillment is less easy. It is, however, more easy in the case of acute nephritis than in chronic.

Taking up first acute nephritis. The first essential condition to restoring the kidney to its normal structure is rest in bed. It is universally recognized that the acutely inflamed kidney has a better chance to resume its natural condition if its owner rests quietly. The second condition is a kind of diet which reduces the work of the kidney to a minimum. Such a food is milk, or better, milk and water, either plain or carbonated, or milk and vichy. Third, depletion of the organ by a brisk purge. A saline is probably the best, though if circumstances render this undesirable, calomel recommends itself by reason of its small bulk and unirritating character. The question of depletion by local blood letting, as by wet cupping over the region of the kidney, may have occasionally to be considered. Succeeding such a blood letting or in lieu of it, hot fomentations to the kidney region may be used as tending to favor resolution, while harmless. These measures are practically all that can be carried out in a case of acute nephritis, and fortunately they are quite sufficient in the majority of cases. Slowly in some cases, rapidly in others, the diseased kidney resolves itself into the normal organ and the symptoms subside.

The second indication is in a measure fulfilled by the success of the first, but there are dangers and symptoms which sometimes brook the delay more or less attached to fulfilling the first. These symptoms are uræmia and dropsy, and fortunately the same measures answer for both. The purge and depletion already recommended are themselves calculated to avert the danger of uræmia, while judicious re-

stitution of the dose may keep up the desired effect, though further measures are often necessary.

Of these, after purgation, the most important is sweating. This may be done by the vapor bath or hot air bath. I place sweating after purgation because I have fresh in my mind the claim of Von Noorden and his pupils, sustained by experiment, that elimination is more effectual by the bowels than by the skin. The question as to whether skin elimination shall be further stimulated by drugs, and especially by jaborandi or its active principle, pilocarpin, must be determined by the urgency of the case. To these measures are commonly added diuretics to increase the secretions. Often they are entirely unnecessary. Diuretics certainly should follow rather than precede purgatives in my judgment. Digitalis and the salines hold the first place. The effect of both is much more easily obtained after purgation, but the salines represented by potassium citrate and acetate may be administered earlier than digitalis. Of these, I prefer the citrate, and by it, in 10 to 15 grain doses in solution every second hour, prompt diuresis may often be secured.

By such simple measures as these the majority of cases of acute nephritis can be cured in the course of four to eight weeks or three months. Most of the remaining cases become chronic. A few of the patients die.

Other measures of comparative modern suggestion which may be employed in desperate cases of uræmia are injections of hot water thrown high up into the bowel and subcutaneous or intravenous injections of normal salt solution. My experience with the former has not been very satisfactory, as I have seldom been able to get the injections to stay. They are, however, harmless. It goes without saying that the bowel should be washed out first, after which the injection is more apt to remain. It is supposed by a reflex act to excite secretion of urine.

Subcutaneous or intravenous injection may be employed under like conditions, but should always be preceded by venesection. In this way a dangerous overloading of the right heart may be avoided and a dilution of the toxic condition of the blood brought about, which may favorably influence an uræmia.

There is no contraindication to the use of alcohol in its various forms in acute nephritis, when indicated for its usual purposes.

The problem is vastly more difficult in the case of chronic nephritis. I think it may safely be said that there is no drug which promotes a return to its normal condition, of a kidney in a state of so-

* Read before the Section of Medicine, New York Academy of Medicine, December 21, 1905

called chronic inflammation— interstitial or parenchymatous. It may be said in a general way that the same restful life and simple food have a tendency to promote a cure, but they are so slow in acting that they can rarely be availed of, because whatever helpful tendency there may be in them is soon counterbalanced by the harmful effect of prolonged confinement and insufficient exercise. Occasionally, however, a slight gain in the cure may be made by rest in bed for a month or more, when the effect of lack of exercise may be largely compensated by daily massage. By such treatment a large albuminuria may often be reduced to half its volume or less, but rarely completely removed.

There is, however, one method of resting the kidney applicable to chronic nephritis, which unfortunately is available only to the rich, and that is residence in warm climate. The rarity of the development of chronic Bright's disease in warm climates is well known, while the salutary effect of residence in such a climate to one removing there from a cold, damp one is abundantly tested by experience. A remarkable instance of the effect of this treatment and of the opposite on the return of a patient to his home in America at an inclement season of the year is related in my book on Bright's disease. Whenever it is possible, therefore, for a patient with chronic nephritis to transfer himself to such a climate, he should do so.

It must be admitted, therefore, that we can do little by direct medical treatment or by total rest to restore the normal structure of a so called chronically inflamed kidney. On the other hand, the slight tendency to natural recovery which exists in every case may be subverted by the opposite course of indifference. A certain golden mean, therefore, seems the advisable course, except in these advanced stages of the disease, when the same restful and dietetic treatment recommended for acute nephritis must be adopted, though with much less prospect of cure.

In chronic cases, therefore, our medical treatment must consist of measures likely to avert the dangers to life due to the disease which tend to increase and to encourage the natural tendency to repair, that exists in every person afflicted with disease.

Now, in a certain class of cases where the evidence of the disease and its consequence are so slight that the patient would not know he was ill but for the evidence furnished by the urine, I am satisfied to do nothing but recommend temperance in eating and drinking and avoidance of a strenuous life. Such cases often go on for years without getting any worse, and they may attend to ordinary business under the conditions named. The same is true of another class of cases, in which there is even larger albuminuria, provided the patient's health is otherwise good, except that greater rigor in diet must be observed. And herein comes one of the nicest questions, the adjustment of the food of a case of chronic nephritis, a case not *in extremis*. What shall the patient eat? In the first place, he must eat moderately of anything he does eat. Nothing is better determined than that overeating is a cause of chronic Bright's disease. Certainly, therefore, large eating cannot be expected to promote its cure. And of foods what shall he eat? Milk, not too rich, may be allowed *ad libitum*, and a quart a day be the minimum quantity. Of rice, potatoes and

vegetables in general, including asparagus and tomatoes, because of their absence of protein, he may eat, having due regard to their digestibility. Anything indigestible reacts on the kidney and increases albuminuria. The various cereals, especially those rich in starch, as hominy, grits and farina, and those having the same composition as wheat bread, he may eat. Sugars are also allowed, although often inexplicably forbidden by those who do not consider their composition.

May he eat meat? Yes, in small quantity and of any kind except again the indigestible varieties, like pork and veal, and the latter are excepted only on account of their difficult digestion. An absurd error has arisen with regard to white meats. So much has been said of them as safer than the red meats that many persons have come to think that any quantity of white meat, of chicken, for example, is allowable, while red meat is poison. The quantity of protein is really so very slightly greater in red meat than white that there is no reason why the latter should be preferred. But the most allowed of either quantity must be very small, and that not more than once a day. Perhaps the best time is the middle of the day, although a very small portion of crisply done breakfast bacon may be allowed occasionally in the morning and a few raw oysters in the evening.

Shall he eat eggs? Yes, with a reservation. It is many years since Senator first published results of his observations on the effect of eggs as food in albuminuria, which went to show that they increased the albumin. Accordingly he discouraged their use in Bright's disease, and thus set the current of professional opinion against them. He was, however, soon followed by others, who claimed that eggs thus used, even in large quantities, failed to produce albuminuria. I myself fell into line with those who thought that eggs, at least in moderate amount, are not harmful, and have been in the habit of allowing a single egg daily for breakfast in cases of chronic nephritis. Here, as is so often the case, the small boy came to my rescue to set the matter straight as it appeared to me. A professional friend placed under my care his son, who is the subject of an albuminuria of adolescence. The father informed me that in the boy's case the ingestion of a single egg produced marked albuminuria. I could scarcely credit it, but on making a systematic trial found that he was right. Thus I learned that there is an idiosyncrasy in the matter of eggs, as in a good many other things. Eggs should therefore be given tentatively, and if experience prove that they produce albuminuria in a certain patient, they should, of course, be discontinued. Otherwise there is no reason why a moderate amount of egg food or an egg once a day should not be allowed to a patient suffering from chronic nephritis.

The use of alcohol in chronic nephritis requires allusion. As it is acknowledged by all that alcohol is an important cause of chronic nephritis, it is only reasonable to suppose that its continued use will aggravate an existing condition. It should therefore as a rule be prohibited. On the other hand, there may be occasions in which small quantities of alcohol may be serviceable for a time. Such are occasions when there is a want of appetite or

even disgust for food. At such times a little whiskey and water at meals can do no harm. I have sometimes advised a small cocktail once a day before a meal, with tincture of nux vomica or gentian before the remaining meals. Sometimes, too, a single glass of burgundy or even of champagne may be taken with food with advantage. This is, however, safely permitted only for a time, and strict injunction should be given against the abuse of alcohol. Its harmful effects are not limited to the kidneys in these cases. They extend also to the heart. This point will be further referred to in speaking of tea, coffee, and tobacco. Alcohol is less harmful in chronic parenchymatous than in chronic interstitial nephritis.

Condiments are especially contraindicated in cases of chronic nephritis, most of them being directly irritative to the kidney. Such are mustard, pepper, ginger, radishes, horseradish, and the like. Von Noorden reports hæmaturia as a consequence of the free eating of common radishes. The fruit juices, including vinegar, on the other hand, are harmless.

Some allusion should be made to ingested sodium chloride, although I know nothing about it from personal experience. Somewhat over a year ago French clinicians announced that in certain cases of chronic parenchymatous nephritis retention of chloride of sodium occurred, and that this led in some way to the retention of water and the production of œdema. Hence the ingestion of common salt should be limited in chronic nephritis, and especially in chronic parenchymatous nephritis. The only observations confirmatory of these conclusions which have come to my notice are those of Dr. A. O. J. Kelly, published in Volume XXV of the *Transactions of the Association of American Physicians*.

Coffee, tea, and tobacco fall into the same category with alcohol, of substances which may or may not be harmful in chronic nephritis, and as to which it is not always easy to say when they become harmful. It must not be forgotten that the patient with chronic nephritis dies from the effect of cardiac failure as often as from the direct consequence of the nephritis. The cardiac hypertrophy which becomes associated with so many cases of chronic nephritis, and especially of contracted kidney, is a conservative and compensatory process, and through it the life of the patient is often prolonged for many years; and it is only when the hypertrophy gives way to degeneration and dilatation that the real mischief begins. Hence the proper nutrition of the heart must be maintained as long as possible. One of the most useful measures to this end is protection against overwork, either as the result of over-exertion of the body or the result of the direct action of cardiac stimulants. Such stimulants are tea, coffee, and tobacco in excess. When allowed, they should be allowed in small quantity, and when there is any doubt about the propriety of their use in a given case, they should be omitted altogether. It is for the same reason that digitalis, except to tide over certain short emergencies, is harmful in many cases of chronic nephritis. The heart should be strengthened by suitable food and by graduated exercise, such as the Schott movements and Oertel's exercises, and especially massage; also by the Nau-

heim baths. The bath treatment should, however, not be extended to patients in the most advanced stages of the disease.

What shall we say of the use of water? It has always been considered that the free ingestion of water is indicated in chronic nephritis, especially if associated with free renal secretion of water, because it was supposed that elimination of toxic substances was thus favored. It remained for Von Noorden to show that such water ingestion could be carried to excess. He made this the subject of a communication to the Congress of Internal Medicine held in Carlsbad in 1899, and has contributed to it in recent publications. He concluded that ingestion of water to the amount of six to eight pints daily may be harmful in favoring dilatation of the heart through overwork thus necessitated, and that benefit therefrom was only apparent. He sustains his conclusion by reported cases in which restrictions of such ingestion resulted in relief to stenocardia produced by cardiac dilatation. He concludes by saying: "In many cases of contracted kidney (as in cases of cardiac disease) sensible restriction of water may save life."

As the result of his experience he would limit the ingestion of water to 1.25 liters, or about 1,250 c. c. daily, and advises such restriction in the way of prophylaxis, while the heart is still strong. Under such ingestion the patient should pass 1,300 to 1,500 c. c. urine daily.

Finally, as to drugs, are they of any use in chronic nephritis? Except to meet certain symptoms, the result of the disease, for the most part, none. Probably in the main more harm than good has been done by drugs in the treatment of chronic nephritis. I have already explained how digitalis may be harmful in overworking the heart. There is no drug known which will diminish albuminuria directly or indirectly. Abnormally scanty secretion of urine is best treated by potassium citrate in 10 or 15 grain doses every second or fourth hour. I have never been able to satisfy myself that the widely known Basham's mixture is a diuretic except through the water it contains. Anæmia is best treated with iron, although iron is sometimes harmful in locking up secretion.

One drug only requires further allusion, and that is the potassium iodide or sodium iodide. This has acquired considerable reputation as a permanent vasodilator and is used from this standpoint a good deal, especially where there is much arterial sclerosis. I am using it in most of my cases, commonly in small doses, rarely exceeding five grains three times a day. In such doses, except where there is an idiosyncrasy, it is well borne and certainly does no harm. How much good it does I do not as yet know.

I cannot leave the subject without some allusion to the use of opium in cases of Bright's disease, either in the treatment of uræmia or of concurrent affections. As the result of a large experience, I say do not use it if you can get along without it. I frequently use opium for concurrent affections, but always with some concern, and I begin tentatively with small doses, feeling my way. I have often seen it develop uræmia, yet in a few cases I have felt compelled to give it for the relief of urgent symptoms, even when I thought it would prob-

ably ultimately bring on the dreaded accident. It is a wholesome fear. As to opium in the treatment of convulsions in cases of contracted kidney, I believe nothing could induce me to use it. In cases of parenchymatous nephritis, acute and chronic, it may be given with comparative safety, the reason being that in these affections the secreting structure of the kidney is still sufficient to eliminate with enough promptness the poisons which cause uræmia. The recent experiments with methylene blue show how differently the power to excrete remains in parenchymatous nephritis as contrasted with contracted kidney.

When a case of chronic nephritis becomes waterlogged with dropsy and threatened with uræmia, the treatment becomes that of acute nephritis, with the same symptoms. Return to a milk diet with limited ingestion, purgatives and elimination by the skin; if necessary, incisions or the use of Southey's tubes to relieve the tension of the overdistended tissues are indicated at the proper time. Astonishing improvement has resulted in cases which have been looked upon as well nigh hopeless. Operative treatment has saved lives, though it may not have cured the disease.

The saddest symptom of all in chronic nephritis is albuminuric retinitis. The gradually growing darkness with forecast of inevitably fatal termination, the slowly increasing dependence of the strong man on the delicate wife or daughter, make one realize more than any other symptom of disease the futility of human treatment, and it is perhaps fortunate that the prospect of short life succeeds upon the appearance of these symptoms. Yet I think the dictum of the ophthalmologists, that death succeeds within a year after retinitis makes its appearance, is scarcely correct, but that many cases last longer after this stage is entered upon.

But is treatment of retinitis altogether futile? While little is to be promised, I think there is enough to justify treatment that is at least harmless. I am in the habit of putting some patients on biniodide of mercury or on bichloride of mercury combined with potassium iodide, whichever is better borne, and to continue this treatment indefinitely. It has seemed to me to be justified by results. If not well borne I discontinue it.

1506 SPRUCE STREET.

HEREDITARY SYPHILIS.*

By ROBERT W. TAYLOR, M. D.,

NEW YORK,

CONSULTING GENITOURINARY SURGEON TO BELLEVUE AND
THE CITY (CHARITY) HOSPITALS.

Ætiology.—The specific origin of syphilis has been, since the year of the great epidemic of 1494, one of the most prolific causes of animated, even acrimonious, discussion and controversy of any question in medicine. Its discovery has been many times reported, and as Lassar aptly remarks, 125 causes of syphilis have been established within the last twenty-five years.

The latest discovery of the probable materies morbi of syphilis has been confirmed by so many independent bacteriologists that the conviction is

fast impressing itself on the medical mind that at last we have discovered, if not the true causal agent, at least a microorganism which is in some way concerned in the inception and course of the syphilitic infection.

It is germane to this essay only to consider the bearing of this microbe on hereditary syphilis, but it is well to state that it has been extensively found in the primary and secondary lesions of syphilis, both superficial and deep, and not in tertiary syphilis. It has not been observed in other than syphilitic subjects, and their tissues and secretions.

This microbe, first described by Schaudinn and Hoffmann, is called the *Spirochæta pallida*, has been found in such striking constancy that it claims our careful attention as presenting something definite in syphilis, and warranting the opinion that at least we are on the right track.

I will succinctly condense all we now know about the presence of this microorganism in hereditary syphilitic lesions.

Risso and Capollina¹ found the *Spirochæta pallida* in early secondary lesions in swollen glands and in the internal organs of hereditary syphilis.

Babes and Panea² report cases of congenital syphilis in which they found the organisms, and they remark the greatest number in the suprarenals.

Reischauer³ found these spirilla in the liver, lungs, and spleen of the still born child of a syphilitic mother, but not in the kidneys or blood.

Levaditi⁴ found this microbe in the bullæ of syphilitic pemphigus in one case, and in the spleen and lungs, but not in the liver of another heredosyphilitic infant three months old.

Roux and Metchnikoff⁵ found the organism in the tissues of very young heredosyphilitics.

Hoffmann examined a child recently dead presenting syphilitic pemphigus. The liver and spleen showed typical lesions, and in them both these spirilla were found in abundance. The organism was found in syphilitic pemphigus and in the inguinal ganglia.

On the other hand, Hexheimer and Hübner failed to find the parasite in the organs of heredosyphilitic children.

Rille and Cocherodt also failed to find it in the blood, cutaneous lesions, and in gummatous osseous lesions of the syphilitic new born.

I may add that this whole subject has been thoroughly studied by my assistant, Dr. A. Fanoni, who has published two brochures upon it.⁶

We are not certain to-day of the nature of this microorganism, whether it is an animal parasite, a protozoon, or whether it represents a transition form of some unknown parasite. It certainly is premature to claim, as Metchnikoff has done, that syphilis is a chronic spirillosis due to the *Spirochæta pallida* of Schaudinn.

The fact that this microbe has been found in acquired syphilis, and has also been undeniably

¹ *Riforma medica*, August 26, 1905.

² *Berliner klinische Wochenschrift*, June 13, 1905.

³ *Berliner klinische Wochenschrift*, August 24, 1905.

⁴ *Comptes rendus de la Société de biologie*, 1905, p. 243.

⁵ *Bulletin de l'Académie de médecine*, May, 1905.

⁶ *Medical News*, October 7, 1905, and *New York Medical Journal*, November 4, 1905.

* Read before the Alumni Association of the City (Charity) Hospital of New York, January 10, 1906.

discovered in the inherited disease seems to point very forcibly to the view that it is connected in some relation with the syphilitic processes. Indeed, its hereditary transmission is, to my mind, the most convincing fact in this whole question. On this subject Flexner's⁷ remarks, though conjectural, are very apposite. He says:

The great length of time during which the microorganism of syphilis must, under some conditions, endure in a living state in the body, constitutes a fact of high importance in the history of the recurrences and the congenital transmission of the disease. Hence the question arises whether there is reason to believe that congenital syphilitic manifestations are associated with the occurrence of the pallida, whether the number and distribution of this organism are such as to explain the lesions and the infectiousness of this disease, and whether the spirochæta exists equally in those cases of congenital syphilis which are the offspring of a parent suffering with florid syphilis, and of another in whom the disease has not manifested itself for many years. We are, fortunately, in a position to state that the evidence at hand indicates that the spirochæta survives in the body for many years and is transmissible by a parent herself, free from the usual signs of the disease.

It will require much time, study, and broad investigation to determine the question whether this tenuous and illusive microbe was a potential factor in the great epidemic of 1494.

Such has been the vogue of the Schaudinn-Hoffmann microorganism that very many have lost sight of the work of Siegel in trying to discover the materies morbi of syphilis.⁸ This observer worked for a long time on a broad basis and has called to his aid experimental inoculations of rabbits and monkeys (over 50 in number) with the secretion obtained from the cytorrhyses flagellates, a parasite found by him in most cases of syphilis. Siegel states that from the inoculated rabbits he reinoculated twelve monkeys, with the result of producing primary and secondary lesions. Further inoculations from one monkey to another were equally successful. In every animal at the height of the disease the cytorrhyses flagellates were found in large numbers as the only parasites in the blood and tissues. He, therefore, maintains that the *Cytorrhyses luis* is the cause of syphilis. It is interesting to note that R. Freund⁹ found Siegel's parasite in every case of syphilis examined by him. He says that the blood of syphilitic patients undoubtedly contains flagellated parasites, being so numerous that two to six may be counted in every field of the microscope. As soon as the patients received antisymphilitic treatment the parasites became less numerous, and after a course of inunctions could no longer be found in the blood.

We certainly are threatened with an *embarras de richesse* in the matter of the parasitology of syphilis, for Max Schüller,¹⁰ who has done good work in the study of cancer, has made exhaustive microscopical and bacteriological investigations into the cause of syphilis, and he has reached the

conclusion that the disease is caused by protozoa.

Qessionek and Kiolonemoglou¹¹ found in the kidney, lung, and liver of a syphilitic fœtus groups of 10 to 40 bodies which closely resembled certain protozoa in that they possessed a distinct capsule with homogeneous protoplasm and well defined nucleus.

Horand¹² also has his microorganism, and states that in 1902 he discovered in the blood of a syphilitic infant germs like a small eel, endowed with a spermatozoid movement, moving rapidly about the microscopical field, and, adhering to them, highly refractive circular bodies. No description of these bodies was to be found in syphilitic literature and Horand pursued his investigations alone for some time. He details his method of mounting blood for the purpose of finding this germ, which was evidently not a bacillus, a sporulated capsule, or a trypanosoma. Horand has found it near the primitive chancre, and watched its evolution, in the blood and lymphatic vessels, in mucous plaques, and in secondary and tertiary ulcerations. It is of both sexes. Horand states positively that he can make an absolute diagnosis of syphilis by examination of the blood, and believes that he has discovered a hitherto undescribed parasite of intraglobular evolutive form, a sporozoon, a protozoon, or best a hæmoprotist, which can always be found near the characteristic lesions of syphilis and, in a characteristic form, in the blood of syphilitics.

Finally, I may add that Max Joseph¹³ and Piorkowski allege that syphilis is caused by a specific bacillus discovered by them after great care and toil in the recesses of the seminal passages and in inguinal ganglia and in mucous patches.

Who will carry away the prize?

INFECTION IN THREE SUCCESSIVE GENERATIONS.

In no department of heredisyphilology is there more doubt, uncertainty, and scepticism than in the question as to whether syphilis can occur in three successive generations. Many cases have been reported which, though seemingly reasonable and in a measure convincing, have yet presented lacunæ of greater or less importance and have therefore failed to establish full conviction in the mind.

The subject is a very comprehensive and intricate one and attended with many difficulties and drawbacks. In the first place, cases are rather rare, since their very infirmities and disfigurements prevent many such men and women from marrying.

Then again the pathological cyclorama is so chronic; the cases are spread over such a long stretch of years that death, absence, the vicissitudes of life, the infirmities of memory, and the efficacy of treatment all tend to make this acquisition of knowledge and facts concerning it very difficult and in many cases impossible. In many instances the reticence of patients, their lies and misrepresentations act as potent stumbling blocks.

¹¹ *Münchener medizinische Wochenschrift*, October 25, 1904.

¹² *Lyon médical*, February 24, 1904.

¹³ *Berliner klinische Wochenschrift*, Nos. 12 and 14, 1902.

⁷ *Medical News*, December 9, 1905.

⁸ *Drei Monographien der königl. preussischen Akademie der Wissenschaften und Münchener medizinische Wochenschrift*, July 28, 1905.

⁹ *Münchener medizinische Wochenschrift*, September 19, 1895.

¹⁰ *Dermatologische Zeitschrift*, x, 4, 1903, and xii, 1, 1905.

Very many cases have been reported which were lacking in essential details and the barest and vaguest conjectures have been paraded as facts. In spite of all drawbacks, however, there had been an underlying conviction in the minds of many medical men that infection to the third generation was pathologically possible and probable; therefore, though for periods the subject may have hybernated, it has never been seriously doubted, much less discarded. It is well to repeat the fact that time and treatment are the two great factors in establishing doubt and in lessening the occurrence of this morbid triad.

When one goes over the literature of this important question one is struck with the fact that certain well attested cases did not attract the attention they deserved and did not establish a quasi conviction.

There are two recitals of cases which are most illuminating and convincing, and it is strange that their import and significance was not recognized many years ago. I allude to the classical cases of Jonathan Hutchinson (1865) and to that of Cæsar Boeck (1889), which have proved to be the beaconlights on this obscure subject for many years. Many other authors have reported cases in which there were certain elements of truth, but they failed of conviction and were disregarded. But it is nevertheless true that the cases of King, Atkinson, and others, though they were in some particulars unsatisfactory, did good in the fact that they kept the subject alive.

In this paper I hope to present irrefragable evidence of my own to prove that this third infection is an established fact. In addition I shall quote in full (for historical accuracy and in strict justice) the cases of Hutchinson and Boeck. Later on I shall quote the cases and some of the contentions of that talented son of the great French professor of venereal diseases. I refer to Dr. Edmond Fournier, who has written so learnedly and exhaustively on the dystrophies of hereditary syphilis.¹⁴ In this way I think that this interesting but ill understood subject will be authoritatively placed before the medical professions.

PERSONAL CASE I.—The grandmother was a perfectly healthy woman and was married in 1869 to a man whose history I never could obtain, but who acknowledged that he had chronic rheumatism and that he had taken potassium iodide for years. (In later years he suffered from cardiac disease and died of nephritis.) Several months after marriage the wife became syphilitic and presented severe varied and extensive secondary symptoms, which were quickly followed by gummatous tumors and abscess of the arms and legs. She also suffered from perforation of the hard palate. She was a woman in whom the infection seemed to run riot, and was most careless and indifferent in following treatment. After severe ordeals she, in later years, lost all evidences of syphilis and became hearty and strong.

In 1871 this woman, who is the first genitor, in the second year of her active syphilis, became pregnant and in 1872 had a girl baby. For a time she took anti-syphilitic treatment, but not in an active and persistent way.

The baby was not markedly thin or anæmic, though it had typical snuffles, roseola, mucous patches of the mouth and genitals, and typical syphilitic pemphigus of the palms and soles. She had a relapse within a year of generalized papular syphilides. Under treatment administered in a haphazard manner, this baby became seemingly healthy, presented no visible lesions or sequelæ, and at her fifth year it was noted that she seemed healthy, had gradually gained in weight and seemed well nourished. This child had no further treatment whatever, and her mother looked upon her as thoroughly cured. (The mother had two other children, a boy and a girl, who never gave any evidence of specific taint.)

The woman's daughter grew up to be a large, big boned, strapping girl, who was married to a perfectly healthy man (well known to me) in 1888. She has never been infected with acquired syphilis.

In two years she had a baby girl at term, the victim of syphilis in the third generation, which was thin, weakly and atrophic, and was only raised with great difficulty, and suffered from gastrointestinal disorders, mild bronchopneumonia and marasmus. Under careful hygiene, change of air and proper medication this child became much improved. In 1896, however, I found her with Hutchinson's teeth, double mild keratitis and deafness in one ear. In the following five years she had swellings of the sternum, clavicles, both radius, and ulna and tibiæ. In 1902 she began to develop subcutaneous nodules on the arms and thighs, and later on on the legs. These lesions increased in size, became adherent to the skin, ulcerated, and presented a typical picture of late gummata, such as we see in acquired syphilis. When examined recently the child, being twelve years old, was very small for its age, not very acute in intellect, atrophic, and in general puny and unwholesome. She needs the greatest care, and constantly suffers from gastric and intestinal disorders and is very prone to catch cold.

Summed up this pathological tragedy reads as follows:

First.—Grandmother infected with syphilis in 1869 had secondary and tertiary lesions of much severity. She was careless of treatment. She was the first genitor.

Second.—In 1872 this woman gave birth to a girl baby which presented classical hereditary syphilitic symptoms. After many vicissitudes this child (the second genitor) grew up seemingly healthy and strong, and never having been infected with acquired syphilis, she in two years gave birth to a baby daughter.

Third.—In 1890 this second genitor gave birth to a miserable weakling girl, atrophic, marasmic, with very little strength and vitality, who at birth gave no distinct evidence of hereditary syphilis (third generation), but who in five years developed true dystrophic symptoms; Hutchinson's teeth, keratitis, ear troubles, and osseous swellings, and later on unmistakable evidence of a virulent form of late syphilitic infection (third) in characteristic gummatous tumors and ulcers.

This third syphilitic by inheritance is now growing up a victim of infantilism and general atrophy.

It will thus be seen that all the pathological links necessary to undoubtedly prove a case of syphilis lasting to the third generation are furnished by the recital of this lugubrious history involving three females.

¹⁴ *Stigmata dystrophiques de l'hérédosyphilis*, Paris, 1898.

PERSONAL CASE II.—A syphilitic man, aged 24, who had been infected two years previously and who was indifferent in following treatment, married a healthy young woman in 1868. Within two years this woman became syphilitic and pregnant. She and her husband were neglectful in the matter of treatment and in 1870 she gave birth to a syphilitic male child with all the classical symptoms of inherited infection. The child was tolerably well treated for a time, but when four years old he was brought to me again with Hutchinson's teeth, opacity of the cornea, stunted nose, and marked cicatricial fissures at the angles of the mouth. In the course of time he became reasonably strong and healthy. His intellect was remarkably keen, and he developed into an alert lad, very proficient in business. His mother realized at last the necessity of treatment for herself and the boy, and the latter was treated on and off for six or seven years. This lad grew to manhood and was not infected with acquired syphilis at any time. I am certain of this point, since I knew the whole family so well. The mother had three children subsequently, none of whom presented any blemish. She had no miscarriages.

When the young man was twenty-five years old, in 1894, he married a perfectly healthy girl aged eighteen, who never presented any evidence of syphilis at any time. The young man (the second genitor) remained healthy, bright, and strong.

Three years after their marriage (1897) the wife gave birth to a rather thin, unwholesome looking girl, who presented no syphilitic lesions whatever. This girl grew up weak and ailing, suffered much from bronchitis and in summer from diarrhœa. She remained rather thin and much undersized, but intelligent and vivacious. Her teeth were not typical of inherited infection, but they were irregular and stunted. When five years old arthritis of the knees, one elbow and the sternoclavicular articulation caused the patient much suffering. Later on there was periostitis of both tibiæ and one radius, which was also very painful. By my direction mercurial ointment was rubbed over the affected surfaces and potassium iodide was given in liberal doses. The first effect of this treatment was magical, and with every recrudescence, of which there were several, it was repeated. The result was that in about five years this girl seemed to take on new life. She grew in stature, in flesh, and in general well being, and to-day is well nourished, lively, and buoyant and bids fair to be a comely, healthy girl. She was evidently the victim of syphilitic heredity.

The contrast between the condition of the father in early years and that of his daughter was very striking. The one was an hereditary syphilitic, the other was the victim of syphilitic heredity.

A synopsis of this case shows the following facts:

First.—A healthy woman, married to a man, syphilitic two years, contracted syphilis two years later coincidently with the development of pregnancy.

Second.—She gave birth to a male child who soon after birth was characteristically heredito-syphilitic and later developed typical undoubted evidences of inherited taint, which showed themselves for several years. He never was infected with acquired syphilis. He married a healthy girl.

Third.—Three years after the marriage of this second genitor, the wife gave birth to a thin, weakly girl who presented the appearances of infantilism. At four years many dystrophic symptoms of the bones and joints developed and

were promptly cured by active antisyphilitic treatment. This case, therefore, was a clearly marked illustration of the development of syphilis in three generations. In the first, active syphilis; in the second, virulent hereditary syphilis; and, in the third, a dyscrasic condition attended with well marked dystrophic changes.

Hutchinson's cases¹⁵ as to the third generation of syphilitic parentage are as follows:

CASE I.—Mrs. K. brought her child to me at the Metropolitan Free Hospital on Friday, February 23, 1865. The child, a girl of five years old, was of dark complexion and well formed features; she was very florid and rather handsome. Her ailment was chronic synovitis of the left knee joint, the knee being rather swollen, but not specially painful; she had no other diseases. Her eyes were perfect, as also her hearing. Mrs. K. herself attracted my attention at first glance by her marked syphilitic physiognomy. Her corneæ were clouded by bygone keratitis. The bridge of her nose was sunken, and her complexion was pale and earthy. I asked her to show her teeth and they proved to be typically malformed. She was a tall woman of dark complexion. She told me that she had had but the one child above mentioned, and that she never had any others, nor had she had miscarriages. She reported that her child, excepting as to her knee, had never been ill in any way.

CASE II., in which a mother was the subject of inherited syphilis, and her first child suffered from infantile symptoms.—Mrs. W. came under my treatment for syphilitic keratitis. She was a florid young woman, aged 21, who had been married one year, and was now nursing her first child. Although her aspect was florid, and she looked fairly healthy, yet she presented, in addition to the keratitis, unmistakable evidences of inherited taint. Her teeth were notched, there were scars at the angles of the mouth, and her forehead was protuberant.

I inquired as to the health of her infant, and was assured that it was perfect. At my request she brought it with her at her next visit, I found it plump and well grown; but its nostrils were obstructed, and its buttocks were covered with copper tinted scaly patches of the most unmistakable character. These symptoms disappeared subsequently, under mercurial treatment, and the child is now living and well.

Here then we appear to have an instance of a mother who is the subject of inherited syphilis transmitting a taint to her offspring, and that offspring showing the usual conditions of infantile disease. No such fact has, I believe, been as yet recorded in the annals of medicine, and it ought to be received with incredulity. Might not the taint from which the child suffered be the consequence of acquired disease in one of the parents? As regards the mother I think such a suggestion highly improbable. She appeared to be a modest, well conducted person; she was quite young, and respectably married; she had, besides, no symptoms of acquired disease, and as being the subject of inherited taint she must be supposed in some degree protected from contagion even had she been exposed.

The husband was most anxious to be cured of a sycosis, and would, I think, have confessed anything which he thought likely to assist in its treatment. He denied syphilis.

This case seems, then, as far as I can sift it, to favor the belief that a mother, herself the subject of inherited taint, but in a latent condition, may transmit that taint in so active a form that her first born shall show unmistakable symptoms in infancy. It is most important to note that the symptoms shown by

¹⁵ *Clinical Lectures and Reports of the London Hospital, 1865, pp. 153 et seq.*

the child were exactly like what are most common in the offspring of those who have only shortly before suffered from acquired disease, *i. e.*, coppery blotches and snuffles. What a melancholy vista here opens to our view! If such transmission be possible, where is the thing to end? If the first born can present such unmistakable symptoms, surely we must admit that the younger ones, although perhaps not showing overt disease, will be, in degree, tainted also. I am quite aware that the doctrine of transmissibility of syphilis to the third generation has been held by many, and by a few taught prominently; but it has been hitherto held without a shadow of proof, on the barest and vaguest grounds of conjecture, and amongst the diseases which have been hastily assigned to its influence are some which, there is every reason to believe, acknowledge no such origin.

Again, I must repeat that the single fact which I have now recorded must be received as yet with great scepticism. When a series of similar ones can be produced, it will be quite time enough to admit the truth of the conclusion to which it seems to point.

It must be remembered that prior to Hutchinson's demonstration of his classical triad of inherited syphilis, little that was definite was known about the development of that disease after the early and exanthematous stage had been passed. Hutchinson's observations and demonstrations were really a revelation, and from them the era of light in hereditary syphilis began to dawn after long years of ignorance, doubt, and uncertainty. With the solid basis of facts presented by Hutchinson's triad the full symptomatology of hereditary syphilis has gradually been established through the skill and acumen of many observers, so that to-day we have no difficulty whatever in recognizing the dystrophic conditions and lesions of this inherited taint.

The medical world, I may more strongly say the whole world, owes a deep debt of gratitude to Jonathan Hutchinson for his pioneer work in the study of hereditary syphilis. It is given to few men to make such important and illuminating additions to medical science.

CAESAR BOECK'S CASE.¹⁸—The grandmother, A. F. F. (see W. Boeck, *Recherches sur la syphilis*, Christiania, 1862, No. 878), at the age of 18, was under care in the hospital from April 15, 1854, to July 3, 1854, for "ulcers of the genital organs, universal roseola, and opalescent patches on the right tonsil." She was treated with potassium iodide. She was readmitted to the hospital on July 15th of the same year with ulceration of the posterior commissure and labia majora, and was this time treated with calomel; she left the hospital on September 25, 1854. On March 26, 1860, she brought to the hospital her daughter, who was then only two months old. The infant was treated in the hospital by Professor W. Boeck for congenital syphilis of a grave nature up to July 19, 1860. This child returned to the hospital three years later with an affection of the eyes, which was thought to be scrofulous ophthalmia, but which was undoubtedly of syphilitic origin.

When she was readmitted to the hospital, May 1, 1889, she bore indelible traces of congenital syphilis. Thus she had wrinkled cicatrices around the mouth, and traces of an interstitial keratitis of both eyes. There was also an almost complete occlusion of the iris of the left eye, the vision of which was absolutely lost. Finally, the middle upper incisors were notched

(Hutchinsonian teeth). On May 1, 1889, this woman, twenty-nine years of age, brings her son, aged five months, to the hospital, suffering from well marked congenital syphilis. The disease had first appeared when he was about two and one half months old, a somewhat late date for congenital syphilis, but there was not the slightest doubt in Dr. Boeck's mind that it was a case of true congenital syphilis. The disease had begun with coryza, and shortly afterwards a maculopapular eruption began to develop in the inguinal folds, on the buttocks, and thighs, and later also on the face, especially around the mouth, on the chin, and on the forehead.

When the child entered the hospital this exanthem was most characteristic. Red glossy patches were found on the palms and soles, and on the palmar and plantar surfaces of the fingers and toes, signs which are common in congenital syphilis. Both lips and the corners of the mouth were notched with deep bleeding fissures. During his sojourn in the hospital perioritis of the inner surfaces of both tibiae occurred. This and all the other signs disappeared under the use of potassium iodide. The child left the hospital on the eighth of June, 1889, without any manifestation of syphilis. There can be no doubt, therefore, that this was a case of congenital syphilis. In order to verify the fact the parents were carefully cross examined, and they affirmed that no one had ever nursed the child but themselves.

But in order that this case may be considered as congenital syphilis of the second generation, it is necessary that heredity on the paternal side, and a reinfection of the mother, should be excluded. To this end the father was subjected to a rigorous examination. He was 45 years of age, and asserted that he was quite certain he had never had syphilis, that he was married for the first time at the age of 32, that his first wife died, leaving no children, in 1883. He was married again in 1884 to his present wife. On examining him objectively no trace of former syphilis could be found. There is likewise very little probability that a reinfection of the mother had occurred.

The mother had had, before marriage, a child by another father. This child was born in the Christiania Maternity, and no signs of recent syphilis were found, either in herself or her child, which died at the age of one month from convulsions. According to the mother, the child had never shown any eruption before its death. In 1884 she married, as mentioned above; and in May, 1886, her first child was born. This child was in every respect healthy up to the age of two years and two months, at which time it was attacked by scarlet fever, and died with symptoms of croup. She has never had any miscarriages. After a scrupulous examination of the mother, it was impossible to discover any traces of recent syphilis. This circumstance, and the fact that the two first children had not shown any sign of syphilis, and especially that the second was well up to the age of two and a half years, when he succumbed to scarlet fever, seems to demonstrate that the mother never had any kind of recent syphilis. As is known, the more deeply rooted the syphilis is in the mother, the more possibility is there of a diseased child being born after a healthy one. If the mother had acquired syphilis after the birth of her second child in 1886, she would in all probability have communicated the disease to her husband.

E. FOURNIER'S CASE.¹⁹—The grandmother had had four children. The two first were born healthy and strong, and to-day are robust men. The third child was also healthy, but while nursing it she, out of charity, gave the breast to a miserable, small, weakly nursing which soon died, its body being covered with

¹⁸ *Annales de dermatologie et de syphilitigraphie*, 1889, pp. 182 et seq.

¹⁹ *Annales de dermatologie et de syphilitigraphie*, v, fourth series, 1904, pp. 658 et seq.

large suppurating sores. Several weeks afterwards the woman noticed upon herself papules (boutons) upon the breasts and over the whole body. Her own child also presented the same lesions and it died in a few weeks. After this the woman was very sick for a long time and a physician considered the nursling as the cause of her trouble. She suffered for several years with headache of extreme violence. She further suffered with cerebral symptoms and died hemiplegic. Two years after this infection from the nursling this woman gave birth to her fourth child, whose history now follows:

When first seen by E. Fournier he was a thin, wretched little man with a narrow thorax which presented a funnel shaped depression. The left clavicle at the sternum presented a large tumor, the sequela of an exostosis which began in his infancy. He was small of stature, only walked when eight years old, and was carried to school when ten years old, and was constitutionally debilitated, so that he was very hard to raise. He presented characteristically Hutchinson's triad, dystrophies of the teeth, lesions of the ears with discharge and impairment of hearing in the right ear, and evidence of parenchymatous keratitis. By the ophthalmoscope stigmata of hereditary syphilis were clearly revealed.

The son of this man, aged 24, presented a lesion of the thighs which had existed since his fifth year, and its nature had not been recognized until seen by Hallopeau and E. Fournier.

This boy was the eldest of six children, of whom two died when very young, of meningitis. A third had coxalgia and arthritis (there had never been any tuberculosis in the family). The other two children were healthy and strong.

This third person of the morbid chain was both myopic and astigmatic, and on ophthalmoscopic examination undoubted stigmata of hereditary syphilis were found. He further gave evidence of dental stigmata.

In addition to all these ills the patient presented a typical annular tubercular syphilide of the tuberculo-encrusted form, covering a space of 12 by 18 centimetres in extent. This lesion had existed since the fifth year of life.

Now on this category of infections there can be, 1, no doubt of the contamination of the grandmother with acquired syphilis from the nursling; 2, the second genitor, the father of the third victim, was married to a healthy woman and it was proved conclusively that the wife was not infected with acquired syphilis; 3, it was proved that this hereditosyphilitic man was not reinfected with acquired syphilis (syphilis binaire of Tarnowsky); and 4, that the third individual presented dystrophic stigmata and unmistakable evidence of virulent hereditary syphilis. The paternal grandparents of this cycle were not examined, but this hiatus does not affect the integrity of the case made out for the grandmother, son, and grandson, all of whom were undeniably syphilitic.

It is well to emphasize the fact that the second genitor was born two years after the contamination of his mother, and that he was married twenty-three years after his birth.

I may add that in addition to his case Fournier gives the histories of 116 cases by various authors, many of which, however, lack important details, in which in the third generation the lesions were dystrophic. This mass of evidence, however, contains such a volume of truth that it can be accepted in general as clearly showing

that this form of syphilis to the third generation is an established fact and founded on a scientific basis. Among my own records are several other cases in which syphilis in the third degree was clearly shown by unmistakable dystrophic lesions and affections.

Though the virulent form of syphilis in the third generation is not represented by so many cases as the dystrophic form, its occurrence has been, I think, so convincingly demonstrated that the most sceptical persons (if reasonable) must concede its occurrence. The recent case of Fournier and my own must certainly place this subject beyond controversy.

I may add that I have not included the cases of Chivirino, Sorrentino and Tucci, Pospelow, Etienne and Lemonnier, Marshall, and Dezan-neau for the reason that everything which is necessary has been included in the recitals just made, and the condensation of these above mentioned cases would simply amount to cumulative evidence.

These combined reported cases, therefore, show very clearly the salient features of the course of syphilis through three generations.

These cases may be accepted as typical, for they clearly show that there are two distinct forms of syphilitic infection to the third person, the one the *dystrophic form*, rather common, the other the *virulent form*, which is very rare. According to E. Fournier the proportion of rare virulent cases to the dystrophic ones is 14 to 100.

It is unnecessary to further elaborate on the syphilis of the first genitor, nor on that of the second genitor, but we have yet much to learn concerning the life history of the third factor in this pathological group. Pospelow¹⁸ says that the results of necropsies upon syphilitic infants to the third generation differ absolutely from those of the previous generation, with the exception of a general atrophy of all the organs and tissues. Death without apparent cause is peculiar to the syphilitic children of the third generation. Abortions and miscarriages are rarer in the third generation, and do not constitute a pathognomonic sign as in hereditary syphilis of the previous generation. As a rule syphilitic infants of the third generation in the first six months of life do not present any characteristic anomaly, and they may appear healthy for several years (two to five) and then without appreciable cause they become thin and their intellectual and physical condition is more or less stunted. Intercurrent affections very often mask the syphilis and tend to a fatal termination.

The following synopsis of dystrophic lesions and affections has been prepared by E. Fournier, and they are well worthy of remembrance or of reference:

Meningitis and convulsions, dental dystrophies, ophthalmological stigmata, rickets, asymmetrical cranium, keratitis, large globular head, senile aspect, curvature of long bones, erosions of teeth, delayed dentition, reduction in size, exostoses, Hutchinson's teeth, delayed walking, iridochorioiditis, infantilism, lack of intellectual

¹⁸Archiv für Dermatologie und Syphilis, iv, 1901, p. 163 et seq.

development, chronic discharges from the ear, deafness, small head, chronic headache, neurotic conditions, adenopathies, coryza, and inherited debility.

Summing up, therefore, our accumulated knowledge we can safely assert that hereditary syphilis of the third generation does more or less frequently occur, consequently that this infection may undoubtedly be transmitted to the third generation. In other words, a syphilitic male or female grandparent may beget a syphilitic offspring, male or female, which in its turn can communicate the disease to its own progeny in a dystrophic or virulent form, which is, therefore, the specific pathological descendant of its syphilitic grandfather or grandmother, or of both.

It is always important, however, to prove these points; therefore, any reporter of cases must conform strictly to the following requirements:

It is necessary to prove that the little child is indubitably affected with syphilis by the occurrence of virulent specific lesions or by the development of some dystrophic state which is undeniably syphilitic, and it must be clearly proved that the young syphilitic has not been infected with acquired syphilis from another source.

Then as to the genitors: it must be proved that the mother or father of this child was the victim of hereditary syphilis, and that neither one of these genitors was infected with acquired syphilis. Then ascending to the grandparents, it must be proved beyond the shadow of doubt that one or both of them were really infected with acquired syphilis. When these facts are firmly established the case is complete, and the contention that syphilis may be transmitted to the second and third generation is incontestably proved.

ACQUIRED INFECTION IN PERSONS HEREDITARILY SYPHILITIC.

As the result of our more advanced knowledge, the question of the immunity of the victims of hereditary syphilis to subsequent acquired infection is to-day much better understood than it was years ago. We have come to appreciate the fact that contrary to what we some time ago thought, hereditary syphilis occurs in various grades of virulency and benignancy. In olden times inherited syphilis seemed to us a definite and dreadful morbid entity of rather erratic course. To-day we know that there are cases in which what the French school terms syphilitic heredity occurs, in which simply a dyscrasia is transmitted which, while it may greatly weaken its possessor and retard its growth, only shows itself in dystrophic changes in which several or many tissues and organs of the body are involved in more or less nutritional changes and disturbances. In these cases experience shows that under favorable circumstances (chiefly active treatment) the patient gradually regains his health, and later on possesses no immunity to acquired infection. These cases are examples of syphilitic heredity. Then, again, a severe grade of cases is observed in which the resemblance to true acquired syphilis shows itself, and which is a veritable malignant

condition capable of transmitting the infection in early years to a healthy subject, and running a more or less severe course according to the activity of treatment. This condition illustrates true hereditary syphilis. In these cases as a rule the subjects possess an immunity to subsequent acquired infection, and instances are rare in which acquired syphilis attacks a person who had true hereditary syphilis. But in some rare cases, owing to nutritional changes, which we don't understand, and chiefly to the efficiency of anti-syphilitic treatment the hereditary disease seems to become extinct, and then the immunity is lost and the subject may under favoring circumstances contract syphilis. This is what occurred in a case of mine, which was one of marked hereditary syphilis, and I take the liberty of again presenting it to the attention of the profession.

PERSONAL CASE III.—In April of the year 1879 a woman, nineteen years of age, married, and the mother of a three year old, seemingly perfectly healthy, girl, came to me for the treatment of an ulcer on the right side of the nose. This ulcer was quite deep, round in shape, one inch and a half in diameter, and involved the upper lip, cheek, and part of the ala nasi. Its base was covered with a thick, brownish green crust, and its edges were of a dark red color, sharply cut, thick, and somewhat everted. The woman, who was accompanied by her husband, a thoroughly healthy man, could not give any account of her medical history bearing upon hereditary syphilis, and the only suspicious stigmata about her were a few faint cicatricial lines at the angles of the mouth. She also complained of coryza of a slight mucopurulent character without fœtor, and she stated that the discharge from the nose had irritated her upper lip and caused a red pimple to appear, which she had picked and from which the ulcer developed. There was no perceptible adenopathy over the whole body. Being convinced that the woman presented evidences of hereditary syphilis, mixed treatment and a mild carbolyzed mercurial ointment were ordered. Appropriate local treatment for the nose was also directed. At the end of two months the ulcer had completely healed, but owing to the great destruction of tissue, the lower part of the right ala nasi for an inch from the cheek was puckered and cicatrized, and the portion of ulcer on the cheek and lip had also resolved into a firm cicatrix. The result was that the ala nasi was drawn down until it lay upon the sæptum, and that the tip of the nose was turned toward the right cheek. The picture was typical of syphilitic destruction of these parts.

I then lost sight of the case for six months, during which the woman, contrary to orders, omitted treatment, general and local. She then returned with her mother, who gave a clear history of syphilis in her husband, long since dead, and in herself. She had had three miscarriages at early months before the birth of our patient. The latter had a rash, condylomata lata, and snuffles for nearly a year after its birth, and had been a miserable, puny child until it reached six years of age. Two children, born, respectively, two and three years after the patient, had lived and enjoyed good health.

By means of active internal and local treatment the nasal affection, which was still active, was cured in five months with only the loss of a small plate of bone and with no further deformity. During the period of existence of the nasal trouble the woman suffered from marked debility and was thin and cachectic. In the course of the year she recovered completely and became strong, healthy, and plump.

In the fall of 1885, about five years after her recovery from the lesions of hereditary syphilis, and in her twenty-sixth year, this woman came again under my observation. At this time she was covered from head to foot with a macular roseola and a flat, scaling syphilide. Her external genitals were the seat of much hypertrophied condylomata lata, and her pharynx was the seat of mucous patches. This syphilitic infection was contracted from her husband and began in an indurated nodule on the right labium minus, which was present at the time of examination, and was complicated with much indurating œdema. The ganglia over the whole body were typically enlarged, there was marked alopecia, and a dry onychia of some severity served to complicate the case unfavorably.

The woman was cured and is now well and hearty and the mother of another child two years old, lively, strong, and unblemished.

This very interesting history clearly shows that at nineteen years of age hereditary syphilis broke out in a patient who, in early days, had received very little treatment. The wonder is that she presented such a good appearance at puberty and during her first pregnancy. It would be interesting to know what effect acquired syphilitic infection would have had on her, especially during the period of the existence of her late hereditary manifestations, and also during childhood and puberty. Certain it is, however, that in her twenty-sixth year she became infected with the acquired disease, and that the latter developed in her system in a most active form. Now, the interesting question suggests itself: Did the prolonged mercurial course instituted for the cure of her hereditary disease so profoundly modify her system that she lost her immunity again and thus became the victim of acquired syphilis? This, of course, cannot be answered, and all carefully observed and well recorded cases bearing upon this subject will have an especial interest.

As examples of the dystrophic form of hereditary syphilis, or to be more precise of syphilitic heredity, I will quote the following recitals:

Gaucher and Rostane¹⁹ report two cases:

CASE I, that of a man, 81 years old, whose early history was rather incomplete. As a child he was only able to walk when he was three years old, his two sets of teeth were lost and he had a third set. He had the Olympian head, eroded teeth and his palatine arch was greatly accentuated. He had distortion of the left tibia and dystrophic lesions of the eyes. This man contracted syphilis when he was 20 years old. He had a hard chancre of the penis, followed by roseola and mucous patches and fall of the hair of the entire body. Later on he developed mild tabes dorsalis, vesical incontinence, want of coordination in walking, and lack of the contraction of the pupil to light.

CASE II was that of a woman, 23 years old, who contracted syphilis at the age of sixteen and had roseola and mucous patches. She had in youth a dystrophy of the nose, which resulted in its being sunken at the base or bridge and its tip turned up; an appearance characteristic of hereditary syphilis. She later gave birth to a syphilitic infant.

Gaucher²⁰ at his clinic presented a young woman who showed the following stigmata of hereditary syphilis:

Sunken bridge of nose, prominent forehead, striated

and dwarfed teeth. Gaucher called attention to the following points: This woman, whose organism was badly developed, presents a type of general and local dystrophy due to syphilitic heredity. She now has a recently acquired active syphilis with a chancre, papular eruptions, mucous patches, and pigmentary syphilide of the neck.

Gaucher gives a very apt and illuminating example of syphilitic heredity:

A man had syphilis twenty-six years ago, was married, and was the father of three healthy children. After a period of latency he developed a frontal exostosis which yielded readily to specific treatment. Two of his children, aged eighteen and twenty years, have contracted acquired syphilis. This father's syphilis gave them no immunity, and the same condition occurs in myriads of cases.

I may also quote the following:

The late Professor W. Boeck²¹ mentions the case of a child, the victim of hereditary syphilis, whom he treated in its first year by means of syphilization, and who returned when he was eighteen years old with the acquired disease.

Lang²² mentions the case of a man, twenty-five years old, who had suffered until his eighteenth or twentieth year with a severe form of hereditary syphilis, who came to him with a typical hard chancre and swelling of the inguinal ganglia. The further history is not given.

Dowse²³ reports the case of a girl, nine years old, whose mother had had eight miscarriages, and whose upper central incisors were notched and irregular, but yet who gave no history of congenital syphilis. This girl was infected with syphilis from the condylomata lata of a neighbor's child, and had generalized syphilides and lesions of the alæ nasi, pharynx, larynx, trachea, and bronchi. She died of the disease.

Lang's and Dowse's cases were probably instances of syphilitic heredity.

A most interesting case of syphilitic heredity with dystrophic changes has been quite fully reported by Kinnicutt,²⁴ which I had the opportunity of observing. The mother of the child gave a clear syphilitic history as existing before its birth.

The child was two and a half years old when taken to the hospital and at five months had had snuffles and indeterminate sores on legs and mouth. The teeth were normal and the child walked at eighteen months. It was poorly nourished, had some dystrophy of the skull bones, and a moderate degree of rickets. The proximal phalanges presented dactylitic changes, and the right testicle was much enlarged. The child suffered from severe pulmonary symptoms and ascites with grave distention of the abdomen, necessitating tapping. Antisyphilitic treatment gave no relief and the child died.

Histological examination showed general tuberculosis. Sections taken from the testes and one phalanx showed no syphilitic changes, but marked evidence of the lesions of tuberculosis. Had this case been superficially studied and had no pathological examination been made into the condition of the various organs and viscera, it would have been incontinently reported as an aggravated illustration of the ravages of hereditary syphilis. The case very forcibly shows the existence

¹⁹ *Annales de dermatologie et de syphiligraphie*, IV, fourth series, 1903, p. 949 et seq.

²⁰ *La Syphilis*, I, p. 57, 1903.

²¹ *Undersøttelser angaaende Syphilis*. Christiania, 1875, p. 270.

²² *Vorlesungen über Pathologie und Therapie der Syphilis*. Wiesbaden, 1884 and 1886, p. 458.

²³ *Medical Times and Gazette*, June 9, 1877, p. 630.

²⁴ *Presbyterian Hospital Report*, 1896, pp. 47 et seq.

of a severe dyscrasia and the development of that very frequent and fatal complication of hereditary syphilis or syphilitic heredity, namely, tuberculosis.
142 WEST FORTY-EIGHTH STREET.

STATE MEDICINE.*

By E. C. CARTER, M. D.,

MAJOR AND SURGEON, UNITED STATES ARMY,

MANILA,

COMMISSIONER OF PUBLIC HEALTH FOR THE PHILIPPINE ISLANDS.

In contemplating the preparation of a paper on State medicine or prophylactic sanitation, so many theories, so many experiments and so many facts present themselves, that one is at a loss how to begin, how to proceed, and how to finish such a paper. It is the intention of the writer, however, to commence with a brief summary of the conditions that confronted the board of health for the Philippine Islands in the summer of 1902, to continue by endeavoring to lay before you certain of the conditions which existed at that time, and later, in the Islands, and to end as best he may so as to leave the questions suggested, rather than raised in this paper, to be discussed both by the members of this Association and perhaps by the writer himself at some future date when he may command more leisure and be at happy distance from the scene of his trials, disappointments and failures. For there have been trials, tragic and ludicrous; disappointments, keen and humiliating, and failures complete and heart breaking, in the work which the Bureau of Public Health has had mapped out for it here.

If the scientific aspect alone of the work and purposes was to be considered, justice could not be done to the devoted men who have given their best, and an excellent best it was, to sustain the commissioner of public health in his endeavors to meet emergencies, and to pursue the golden mean, albeit a compromise, between the right and the expedient. It is not to be denied that this so called mean has been nearer to the expedient than to the scientific right; and that which has been accomplished has been brought about along the lines of least resistance rather than along the lines of scientific accuracy. For, it has been demonstrated here as elsewhere, that State medicine must be largely influenced by the habits, the customs, the attributes, and by all that goes to constitute the genius of the people whose condition it is desired to improve. And a campaign which is aimed at the extinction of an epidemic or of the betterment of insanitary local conditions, is doomed to failure if it does not take into consideration its susceptibilities as well as the needs of the population.

Now, a knowledge of the sentiments of a strange people, which underlie the susceptibilities, may not be obtained from books, or indeed by observation alone. Through lack of that knowledge, the commissioner of public health for the Philippine Islands has oftentimes found himself in deep waters, from which he has not always escaped unscathed. An effort has always been made to secure the cooperation of the medical faculty of these Islands in any measure that seemed radical, and if success has not always crowned the effort, may it not be due to the

lack of persuasiveness of the sanitary authorities as well as to other causes? Time alone can give answer to this question.

It was of course the purpose of the board of health to arrange a plan of action, clear, definite and logical; to lay out its line of operation and to follow as near to that line as possible. Then by experience it was hoped that a simple and comprehensive method would be found whereby public good could be accomplished, little friction produced, and the people themselves gradually persuaded, led, and finally attracted toward the good. Moreover, if the history of the Teutonic people and of the Latins, too, teaches anything, it teaches that laws and the systems of life are a growth and a development and do not spring, admirable and complete, from the brain of some genius as Athene sprang from the forehead of Zeus. The history of these peoples also teaches that the power and glory of Rome was due as much to the sanitary results of her Cloaca Maxima and aqueducts as to the power of her Cæsars and Scipios or to the genius of her Senecas or Aureliuses. And those nations of the modern world, which are in the forefront of civilization and progress are just those nations which do most for the sanitation of their peoples.

The converse of this proposition is likewise true. Is there a country retreating? Is there a nation decadent? What is its sewer system? How does it dispose of its dejecta and garbage? Among the nations of antiquity, the Egyptians for centuries were preeminent as sanitarians, and one historian at least, asserts that the sanitary laws of the Israelites were derived from the Egyptians. The abhorrence of swine is attributed to a plague, which afflicted Egypt when its inhabitants ate swine flesh, and probably contracted trichinosis; and the burying of human dejecta was a measure derived from the Pharaohs and simply changed to meet condition when Moses commanded that every Israelite warrior should wear a paddle by his sword in order that the neighborhood might be clean and wholesome. Perhaps one of the most perfect types of sanitation the world has ever seen was the Roman camp, with its walls, its moats, its order, its drainage, its latrines and its perfect cleanliness.

The effect of epidemics and of violation of the sanitary laws, the laws of Nature, not of man, but which must be understood and interpreted by man, have been more disastrous upon nations and peoples than wars or any other calamity. The plague in Athens destroyed Greek culture and civilization, as much as did the Peloponnesian War, or the loss of the Athenian fleet before Syracuse. The insanitary condition of the Roman Campania broke the power of Rome as much as did the Goths and Huns. The pernicious malarial fevers and dysenteries due indirectly and directly to the choked canals and drained lands in Mesopotamia, have converted the most fertile regions of the world into a wilderness, the glorious gardens into squalor, the vigorous inhabitants into filthy nomads, Babylon into a cess-pool.

Is it not true that a nation's worth may be gauged by its sanitation; that a people's efficiency may be measured by its life hygiene; its doom predicted from its dirt; its destruction presaged from its filthiness? History proves it by methods as

* An address read at the second annual meeting of the Philippine Islands Medical Association, March 1, 1905.

clear, logical and convincing as those employed in geometry, and science demonstrates it with mathematical precision. But science does more than that. It explains why the fact is, as it is, and better still, it points out a way to remedy the evil. Much is known now in regard to sanitation that was not dreamed of 25 years ago and ten years hence much more will be known. History warns the nations; science may save them. But for those who are deaf, alike to the warnings of history and the teachings of science, it may be said "Their doom is upon them"; "They that are filthy, let them be filthy still." Their decadence may be slow; it is certain; their worth may gradually decrease; it will vanish; their effectiveness disappears, the long night of obscurity falls upon them; their glory is departed; they are dead.

With a full consciousness of these facts and of all they mean for the future of the people among whom our lot is cast, can it be wondered at that the health authorities have been at times overzealous, over strenuous? It is not true that men were ever pursued in the streets of Manila and captured and vaccinated, but it is true that the strong arm of a wise law was ever behind the bureau of health to give it aid when needed; and it is likewise true that the records of the bureau of health show that over 213,000 persons have been vaccinated by the board of health in Manila within the past twelve months and many more by private physicians. When we recall that Manila's population is not more than 220,000 we can understand why that in the year ending December 31st, 1904, there were only 27 deaths from smallpox. Ten of the 27 were Europeans or Americans who had neglected or avoided vaccination, a number out of proportion to the number of whites as compared with the number of natives; and a hopeful conclusion may be drawn from this. The natives are not particularly averse to vaccination. A law making vaccination compulsory existed during the Spanish regime. It was reenacted by the American authorities and as the people have become accustomed to it they have ceased to fear or distrust it. The change may be remarked from year to year and at present the difficulty is not to get the people to be vaccinated but to get the vaccinators. It is also not to be denied that many of the vaccinators created difficulties of their own.

It was my purpose to sketch briefly the methods pursued in our vaccination, and let me say also that credit for these methods is due chiefly to Captain E. L. Munson, Medical Corps, U. S. Army, and to Dr. Thomas R. Marshall, Chief Health Inspector. The latter has had control of the system and has modified and altered it as circumstances required, so that the vaccination division of the bureau of health has developed into its most important and has demonstrated, if demonstration were needed, that good methods are developed, rather than made to order.

A board of health existed in Manila under the Spanish regime and gave counsel to the government. Members of the board went to places infected with epidemic diseases, studied their ætiology, prescribed rules and regulations, rendered reports, etc. A board of health was established by the military authorities and the sanitary orders of the pro-

vost marshal are about the best regulations known to the writer. They are comprehensive, clear, practical and definite. In the period of reaction against militarism, many of the orders have been changed, not usually bettered. It is hoped that these changes will be rechanged so as to swing back to the original position, with the additional force which will have been added by a phraseology somewhat better suited to the legal point of view. But on the whole, the writer believes after an experience of three years that the sanitary orders of the provost marshal constitute the best working formulæ for health legislation with which he is acquainted. Their weakness is not in their sanitary but in their legal aspect.

Most of us here remember the outbreak, the spread and the final outrush throughout these Islands of the cholera epidemic of 1902 and 1903. At any early date quarantine might have been effective, but within a week, or at any rate within two weeks, it was obvious that quarantine was impossible, detention camps were useless and treatment hardly more advanced than in Hamburg and Altona during the cholera epidemic there. The writer felt compelled to state over his signature to his chief in Washington that all precautions against the spread of the epidemic were doomed to failure; that rational efforts to relieve the sufferings of the sick and destitute were all that could be hoped for, and that the epidemic would cease only when the vulnerable material would be exhausted. The tragedy of that period when 110,000 persons perished cannot be forgotten by those whose duty it was to aid and comfort the people. And the tragedy was made the more heart breaking by the strenuous denial of certain physicians at the beginning of the epidemic that cholera existed; the unfounded reports of poisoned wells, which resulted in the detention and trial of several persons, all of whom were acquitted. One who reads of the cholera epidemic of 1818 to 1820 in Manila will recognize the distressing similarity of conditions which existed between 1818 and 1902. It is the hope of the writer to give at a future time an account of this epidemic with its statistics and its lesson. Let it suffice, therefore, to say that the statistics are conservative and among the lessons are the following:

1. Recognize cholera at the beginning; that is not difficult clinically and microscopically.
2. Acknowledge it frankly; control it in its incipency by heroic means if necessary.
3. Provide stores and comforts for the sick and destitute.
4. No method of treatment, so far developed, save one perhaps, is satisfactory. Intestinal antiseptics, by whatever means attempted, including acetone and silver salts, is most untrustworthy. It is at least probable that the remedies used for the antiseptics do harm. The method of securing from the comma bacilli a product that may counteract the cardiac depressing poison of the disease, as explained by the accomplished director of the biological laboratory, offers a ground for hope, more rational than any other curative method with which the writer is acquainted.
5. In conclusion: While cholera is perhaps the second greatest epidemic scourge known to man, it is one that may be controlled and confined, if not

removed, by wise legislation and authority, by the education of the people in sanitation and hygiene, and by spreading abroad a knowledge of the necessity of using boiled water and hot cooked food. The wise Chinese know this. They drink tea and eat hot rice, and very few Chinese, proportionately, succumbed to cholera in 1902-3. But certain persons attributed this immunity to the use of opium, which is truly a valuable drug in cholera, and many natives assert that they contracted the opium habit in trying to avoid cholera.

In addition to the appalling epidemic of cholera in 1902, the board of health was confronted with the existence of smallpox, bubonic plague, amœbic dysentery,—the most formidable of all tropical diseases—and worse yet, with an active or passively hostile population, and, to a great degree, an indifferent or disapproving medical profession. The frank, outspoken criticisms of the methods of the board could be met, and when reasonable, listened to and accepted, but the criticisms which never reached the ears of those in authority, which sowed distrust, antipathy and fear among the minds of the people, and which caused the belief in poisoned wells and the murder of at least one sanitary agent, were productive of nothing but harm.

One of the stumbling blocks in the way of the board of health, has been the aversion of the inhabitants of Manila to the hospitalization of cases of contagious diseases. An earnest but futile endeavor to overcome this aversion was made. But this endeavor was productive of at least one good result: a fairly equipped and comfortable hospital for these cases. Into this hospital, by reason of cleanliness, cheerfulness, good food, and the comfort and confidence that are the practical handmaidens of such a body of trained nurses as are in the service of the bureau of health, most natives at present seem willing to go. But as there are certain irreconcilables who will not go to the contagious disease hospital, authority has been given to the board of health to leave cases of smallpox in houses, quarantining both house and inmates for fifteen days after the disappearance of the disease. The more usual method, however, is as follows: A case of smallpox or bubonic plague is detected; the patient is immediately sent, in a board of health ambulance, to the proper pavilion in the contagious disease hospital; all who had been in contact with him are vaccinated or inoculated, allowed to go about their business, but observed from time to time; the premises and materials disinfected, and, if necessary, destroyed. Thus, a minimum of inconvenience is caused, and a very considerable degree, if not a maximum, of safety is secured.

It is proposed, at a later date, to present certain statistics, prepared carefully by Dr. Wilkinson, the physician in charge of the San Lazaro hospitals, from which it is shown that the number of contacts in Manila which have developed smallpox, plague or cholera, was so small as to render the necessity of detention in camps doubtful, and that that number was so much reduced by disinfection of the person, clothing and premises and by the vaccination in case of smallpox, or inoculation in case of plague, as to be practically negligible. The statement is hazarded that within a few years the anti-cholera inoculations may possibly reduce still fur-

ther this negligible quantity. It is true a spectacular case occurred in the development of smallpox on board ship, in the person of an European woman coming from Australia, whose husband had died of smallpox. An investigation showed this unfortunate woman had, unintentionally perhaps, deceived the board of health and secured and concealed certain clothing of her husband and had avoided vaccination. A considerable inconvenience resulted from this case to the ship, which was rigidly quarantined on her homeward voyage.

The Chinese, owing to their well developed mercantile instincts, were quick to see the economical side of the method now in general use, and in many cases came voluntarily to be inoculated when they had been in contact with plague so they might not lose the two weeks' time spent in quarantine. It is true the antipest inoculation is more uncertain and more dangerous than vaccination, because the material is introduced through a puncture. But out of many thousand patients inoculated there has been but one fatal result, and that was due to tetanus. It is but fair to add that no tetanus bacilli were found in the materials used, or in the instrument, or on the skin of the unfortunate person inoculated. A strong aversion to all antitoxine or serum inoculation seems to exist here, however, among the native medical faculty, as it is believed the action on the heart is bad.

After the "Sturm and Drang" of the cholera had passed, the bureau of health had small breathing space, for on its heels followed smallpox; pestis bubonica showed its hateful head; rinderpest and other diseases of cattle appeared and surra, glanders and lymphangitis developed among the horses; chicken cholera and hog cholera were reported, and the locusts became a burden to us.

Then, too, the board of health is practically the board of charities—Heaven be thanks, it is not yet a board of corrections—though one is needed—and providing for orphans, the infirm and the insane became most pressing necessities. Sleepless nights, overwork, and long hours, were some of the consequences, and breakdown and collapse of more than one man resulted. To contend against these epidemics, and to meet the ever increasing demand for help, while the financial condition of the treasury did not, to say the least, give hopes that adequate and large sums of money would soon be available, required all the perseverance, persistency and obstinacy that the members of the bureau of health possessed. It was necessary to work as steadily and fearlessly with little or no hope, as it would have been with hope in full view.

And now what do we find? Cholera has disappeared; bubonic plague is reduced to an almost negligible quantity, so far as trade and business are concerned, though no effort to eradicate that disease is for one moment relaxed; and the number of rats destroyed, inspections, cleanings and disinfections made, afford ground for hope that no fear exists of an epidemic of plague developing in Manila. Hog cholera and chicken cholera are now rarely observed. Rinderpest exists at not more than two or three places in the Islands; surra and glanders in but few, and as for the locusts, may we not hope that the same fate that befell the grasshopper in Kansas may befall them? That with the increase in the

cultivated area of land, the places of deposit of their eggs will be disturbed by the plow and the eggs exposed to the heat, and soon be as thoroughly destroyed by the sun as the eggs of the grasshopper in Kansas were by frost and cold?

Moreover, an island has been set aside for leper colonies and a village is being built for lepers, with church, schools, kitchens, bakery, dining rooms, amusement hall, hospital, running water and sanitary appliances. It is intended to erect another village not far away from the one nearly completed so that these unfortunate persons may have their own houses, grounds, trees, fruits and other possessions, and it must be added, contribute, if they can, to their own maintenance.

As for smallpox, the endemic and persistent curse of these islands, it has practically been eradicated from Manila, and is being fought more and more successfully in the provinces. There has been vaccination in the provinces during the fiscal year ended June 30, 1904, 1,007,204 persons, and in the city of Manila for the calendar year ended December 31, 1904, 213,492 persons.

Our Government has met the calls for charitable aid in no niggardly spirit. It supports, in one institution, forty-five female orphans, some of the tender age of seventy years; one hundred and twenty-six orphans, male and female; aged and infirm, thirty-seven, and one hundred and fifty-two insane in another; one hundred insane, nearly, in San Lazaro; approximately six hundred and eighty lepers, not to mention the caring for of some sixty to one hundred sick women; say in all, 1,170 to 1,200 persons.

REPORT OF A CASE OF BRAIN TUMOR WITH AUTOPSY.*

By WILLIAM M. LESZYNSKY, M. D.,

NEW YORK.

VISITING NEUROLOGIST TO THE LEBANON HOSPITAL, ETC.

Morris W., born in Russia, 28 years of age, single, photographer, was admitted to my service in the Lebanon Hospital, October 28, 1903, with the following history: His father died of diabetes, mother and sister living and in good health. During childhood he had measles and scarlatina without sequelæ. He attended school and was well developed mentally and physically.

His sister states that "when he was four years old, he was struck on the forehead by a stone, which resulted in momentary loss of consciousness, but no further trouble followed. After this, he was always very nervous. At the age of thirteen, he was frightened at the sight of the killing of a mad dog, and at once became hysterical and had convulsive fits several times daily for about three weeks. Soon after, his hands and feet began to shake almost constantly, and he would often fall asleep while standing, walking, or eating. He recovered from this condition at the end of two years and came to this country at the age of fifteen. Since then he has often complained of 'heaviness in his head,' and when once asleep it was very difficult to arouse him."

About nine months ago he began to suffer from frequent attacks of severe general headache, preceded or accompanied by vomiting, and this has continued. About two months ago vision began to fail, and blindness soon supervened. He now complains of headache, vertigo and general weakness, with sensation of falling

toward the right side. The appetite is fair, the bowels are regular, and urination is frequent. He has been moderate in the use of alcoholics, admits having contracted gonorrhœa, but denies syphilitic infection, and presents no evidence of the disease.

Examination on Admission.—Well nourished intelligent young man weighing 140 pounds. He is obliged to remain abed, being unable to stand or walk without assistance. The pulse 84 and regular, temperature and respiration are normal. The heart, lungs and abdominal viscera are normal. No tenderness on percussion is found over the skull nor rigidity of neck muscles; both pupils are equally dilated and immovable, and no perception of light in either eye; ocular motility is normal; there is bilateral papillitis of six dioptries with numerous retinal hæmorrhages; smell and hearing normal. He has slight left facial paresis of the lower branches. The grasp is weaker on the left side, and there is slight uncertainty in distinguishing objects with the left hand; the muscular power and resistance are otherwise good in all extremities; both knee jerks are equally active, and no clonus; plantar, Achilles, cremasteric and abdominal reflexes are normal. Objective sensory disturbance is not found. The urine and blood examination are negative.

The patient was delirious at times, and had occasional attacks of headache and vomiting. These symptoms were relieved by cathartics and suitable diet. He gradually became worse, the headache, vertigo, sensation of falling toward the right and downward increased in intensity and there was paralysis of the right external rectus. The grasp became decidedly weaker in the left hand, and there was occasional flexor rigidity of the entire extremity. Left astereognosis was pronounced but disappeared from time to time. It persisted for minutes, hours, or days, being present and demonstrated at one examination and absent at another. Slight ataxia was present in the left hand, but muscular sense and sense of position were preserved, and there was no disturbance of tactile, pain or temperature sensibility. There was diminished resistance in the left posterior thigh group; the left knee jerk and Achilles reflex were exaggerated, and pseudoclonus with general trepidation of both lower extremities were present, being more marked on the left side; both plantar reflexes were excessive but of normal type. From time to time both lower extremities became rigidly extended and hyperæsthetic, when the slightest handling would produce extreme trepidation of both limbs, lasting several minutes.

He was kept in bed, and, in addition to general management, potassium iodide was administered in increasing doses. Rapid improvement in all symptoms soon followed. Two months later (December, 1903), the astereognosis, ataxia, and external rectus paralysis had completely disappeared, the retinal hæmorrhages had become absorbed, and the elevation of the optic nerves had receded to 4 D. The headache, vertigo and vomiting had entirely subsided, and his general health was much improved.

In February, 1904, excepting the blindness and beginning optic atrophy, he was apparently in perfect health and able to walk about the wards and corridors without assistance other than the guidance required by a blind man in order to avoid accidents. Several x ray examinations were made with negative result. Cerebrospinal fluid (40 c.cm.) was withdrawn by lumbar puncture and immediately resulted in a severe attack of headache. Thirty minims of aseptic solution of ergot (3j to 3j) were then given subcutaneously, and in a few moments he fell into a sound sleep lasting about an hour, and awoke free from pain. The fluid was found normal. Lymphocytosis was not present. His condition being unchanged, he was discharged July 21, 1904.

* Read before the New York Neurological Society, December, 1905.

He was taken to an institution for the blind where he remained until readmitted to the Lebanon Hospital on September 23, 1904. At this time his bodily condition and general health were good. Careful and frequent examinations failed to reveal any evidence of disease of the nervous system, other than commencing postneuritic optic atrophy. During three months' sojourn in the hospital, he occasionally complained of headache and vertigo. He was discharged January 1, 1905, and remained at home about six weeks. During that period his memory was good and he was always rational in his conversation and manner, but complained frequently of headache and vertigo, and often said he felt like falling.

He was again placed in an institution for the blind for about six weeks, where he became so ill that he was removed to the house of a relative. While there he had frequent attacks of severe and uncontrollable headache with vomiting, delirium, and general convulsions with loss of consciousness, from one attack every twenty-four hours to one every two hours. During the intervals he was always rational. This condition continuing for several weeks he was removed to the Kings County Hospital May 15, 1905. He was admitted to the service of Dr. A. C. Brush, who noted in addition to the blindness and papillitis, "the memory was poor, attention and volition were slow; the patient complained of headache and had occasional outbursts of delirium. The examination was otherwise negative in result. The diagnosis of cerebral tumor was made, but the growth was not localized. He remained in the same condition for ten days, and was found dead May 25, 1905."

The autopsy was performed by Dr. B. Joseph, resident pathologist, to whom I am indebted for the specimen and the following notes: "The skull is somewhat enlarged, the calvaria is normal. There are numerous erosions of the internal surface of the right side of the skull. The right hemisphere is about one-third larger than the left and intimately adherent to the dura. The pia mater on the right side is altogether obliterated; on the left side oedematous. The cerebral cortex on the right side is thinned. The ventricular cavities contained about eight ounces of clear serous fluid. Attached to the right internal surface of the right lateral ventricle was a tumor about the size of a hen's egg, of cauliflower appearance and exhibiting discrete areas of darker and lighter colors. Upon section, the tumor gave a grating sensation to the knife. The posterior fornix of the right ventricle was enlarged to about twice its normal size. No further examination of the brain was conducted. Body section was not permitted. The tumor, upon microscopical examination, proved to be a small round cell sarcoma containing areas of calcareous deposits."

This is the second case of brain tumor occupying the lateral ventricle that has come under my observation. The first case was reported at a meeting of this Society in December, 1903.¹ Both cases present the following analogous features: The patients were intelligent young adults; both had frequent attacks of intense headache, vomiting, delirium and convulsions; a high degree of bilateral papillitis accompanied by early, total and permanent blindness; astereognosis, without any disturbance of general sensibility; the absence of paralysis involving the extremities; only a slight transient hemiparesis. The diagnosis of brain tumor involving the right hemisphere was made, but the exact location of the neoplasm could not be determined *intra vitam*. In both cases the tumor was

found in the right lateral ventricle and proved to be sarcomatous.

56 EAST FIFTY-EIGHTH STREET.

TRIALS AT THE TRIAL CASE.

By THOMAS HALL SHASTID, M. D.,

MARION, ILL.

We country oculists have very many trials, but our trials at the trial case are the most trying trials of them all. That's why we call this lens filled Pandora box a trial case. For one thing, you understand, "the other party" in such trials is not the other party merely and simply and solely; he is also the judge and also the jury. He is, in fact, the court and the witnesses. He is everything. We ourselves are—well, nothing in particular, only the doctor.

Now it begins. He is a big, fat, burly fellow, and his eyes are bothering him.* He wants glasses, sees rings around the lamp at night, "regular rainbows," and has pains in his eyes and "up here." "Age?" "Fifty-seven. Yes, I have changed my glasses half a dozen times in half a dozen months. They do all right at first, but then, in a few days, they seem to change and go back on me." I suggest the possibility of the change having been in the eyes rather than in the glasses; but opinions are not so easily changed as either spectacles or eyes.

We don't push the argument, and we find ourselves at the trial case. Hyperopia. High degree. Not much improvement in distant vision even with his highest lenses. Near vision also bad. Presbyopia far beyond the point at which it should be at this patient's age.

Then the tension—plus two. Cornea steamy and anæsthetic. Ophthalmoscope reveals the expected changes.

"All right, my friend," I say; "you have glaucoma. You should take an operation."

"Why, I only wanted some spectacles, Doc."

"You want what you need, don't you?" I answer.

"Why, yes; of course you know more about it than I do, but I only wanted spectacles."

"You don't need spectacles merely," I say. "You need an operation also. If you do not wish to take the operation, all right; but, without it, you will certainly go blind—eventually."

The fatuous countenance gives the grin of ignorant incredulity. It says more plainly than words, "I believe you are lying."

"Insure the eye?"

"No."

"Why not?"

"May I ask your occupation?"

"Yes, sir. I am a farm hand."

"Work for another man, eh? Well, do you insure him a crop?"

"Why, no."

"Certainly not. You can promise good work, but you cannot promise a crop. Just so with your eyes. I can perform you a good operation, but I cannot promise success. Sometimes the operation is successful, sometimes it is not. It is, however, your only hope."

"I can't see why you can't insure my eye."

"Look here. The chief reason why I can't give you insurance is simply that I am not in the insur-

¹ Medical Record, January 30, 1904.

ance business. I am in the doctoring business, and the article I have for sale is medical services. Even were I an insurance company, can you not see that it would be the wildest insanity to insure (even to the extent of a doctor's fee) either a man or an organ that was afflicted with a terrible disease. I know of no company that does not take the very greatest pains to reject just such risks. And yet you ask that I assume them, when I am not even in the business, and not only that but to assume them for nothing. The fee that I should ask you, you know, would merely be a reasonable price for the services; I should be getting nothing for the insurance."

The man rises. He fills his great wide chest with the wind of self importance. "I don't need no operation," he says. At the door he pauses. "So you hain't got no glasses that won't change on me, Doc?"

"There are no glasses that change," I answer, "either on or off anyone. Glasses don't change, unless they are put to a wheel and a change is ground on them. But *eyes* change. And yours will change till at last they cannot tell when darkness changes into day."

The man, throwing back his head, laughs a loud "ha, ha!" "You can't fool *me*, Doc," he says. "That's all right though; that's the way to get rich."

Though all my logical pearls are certainly wasted, this man is a human being, and a brother; my heart somewhat aches when I think of the long darkness that will come to him, and of his great stupid floundering mind attempting to entertain itself in that darkness. This, however, is only one of the trials at the trial case. "It's all in the day's work." Next.

A little girl. Her papa with her. Painful eyes and bad lessons. Does she need glasses? Her eyes are red, and I evert the lids. Then I see a case of granulated eyelids in its most terrible form. I show the father, and inform him that this is not a case for glasses. "So-and-so," says he, mentioning the name of a graduate of a six weeks' diploma mill, "cures granulated eyelids with spectacles." "Does he?" I respond. "Then he should not be so modest. He ought to step up and permit the medical profession of all the earth to honor him." But the pearl is trampled. The man and his daughter are gone, to seek the shameless graduate of the shameless mill.

A woman has broken a lens, and wants a new one. Can I furnish one lens only? Oh, most certainly. She has not brought her glasses with her; some day she will return with the glasses, she says. The superfluous visit is ended.

Now enter parents with a cross eyed boy. His is properly a case for operation, but the parents know best. I tell them the truth about the matter once and yet again. Still they think they know best. Well, drops will do some good. Glasses will do more good. Further, training will do a great deal of good. But the case is too far gone to be entirely curable without operation; and, looking down the future for a year or two, I see the parents one day in "the city" having an operation. They return triumphantly, and tell how Dr. Shastid tried to cure their son without operation but failed. "Then Dr. So-and-so, of St. Louis, operated, and now the eye is all right. We're so glad we went." And the city

oculist is calmly assumed to have exclusive information on the subject of cross eyes.

Two ladies of middle age, one of whom insists that she is a lady indeed, and that she therefore must be examined with unusual care. I promise her great care.

"I knew you would not neglect me, Doctor," says she, as she ignores the chair I offer her, and takes another.

At last I get her in the right chair. After much difficulty I succeed in focusing her attention on the test letters.

"I can only read the top line."

"What! Can't you read any more than that? I'm astonished."

"Oh I can read more, but then I have to look."

"All right; please read, even though you have to look."

"Well, Doctor, it sometimes seems just as if a little scum was growing over my eyes."

"Kindly read, even at the expense of looking."

"I can see the letters, but I can't tell what they mean."

"Oh they don't mean anything. They aren't supposed to make sense. They are just isolated, just separate, letters."

"If they don't make sense, what do you have them for?"

"To test eyes with—when I can." I may have sounded just the slightest undertone of expostulation.

"Don't get cross, Doctor. I'm the one that's suffering."

I have my doubts. However, I try to seem delighted with her humor, and I smile my sweetest smile.

Patient suddenly begins reading softly to herself, low down on the card, among the very smallest letters.

I say, "speak a little louder, please. I can't tell whether you are getting the letters right or not."

Patient's patience is thoroughly exhausted. She has borne with me long enough. With a look of infinite scorn, she exclaims, "Well, I know; I know whether I'm getting them right or not. Do for mercy's sake suppose I know my own letters."

"Since when, Madam," say I, with a bit of sleepy irritability (for I sat up late last night with my journals, and then was roused out early this morning), "did the Roman alphabet cease to belong to all civilization?"

I try to heal the wound instantly with another smile, but am too late. The lady rises, heaves a long sigh, looks about for her wrap, discovers it, goes and gets it. She returns to where I am standing, takes her hat from a chair and goes to another part of the room, where she stands before a mirror for some time adjusting her coiffure and her hat.

I make a pleasant remark or two, but these she ignores.

If she only wouldn't be so slow!

I try to busy myself with the various window curtains of the room.

At last she turns. Not yet, however, to depart. She merely addresses a few remarks in a low toned buzz to her companion. The latter now and then responds in like manner, and also occasionally nods her head.

The two pass out without a word to poor me, though I again attempt to start a conversation.

A few days later, I shall hear from a friend that Mrs. So-and-so consulted me the other day, but that I said I could do nothing.

A lady who does much reading. She is twenty-nine and beautiful. Her eyes, however, are red and constantly weeping, and they give to her the most excruciating and unremitting headaches. I explain about the atropine. It is all right, she says. Shortly, the trouble is found. Now she begins to rebel at the thought of wearing glasses. I start to argue just a little, but suddenly her good sense comes to the rescue, and she accepts the glasses. She will never regret the correction of six dioptries of hypermetropia.

A laborer of 40. He does not see at times as well as he thinks he ought.

"All right. Can you read those letters yonder?"

"No, Doctor, I cannot."

"What! can you not read even the very largest?"

"No, Doctor, I cannot."

I hand him some near type.

Again he fails to read even the very largest letters.

I make a tiny pass at the gentleman with my closed hand, and he dodges; so I suspect malinger-ing. I am about to submit the "patient" to some special tests for malingering, when, suddenly, I happen to think of something. "Oh! Do you know your letters?"

"No, Doctor, I do not know even a single one of them."

We are all right now—the ophthalmoscope. Later, strange as it may seem, I find the man, spite of his gross illiteracy, exceedingly intelligent. He has money in the bank, too, and pays his bill promptly.

Then he spoils the whole matter by stopping to talk. His first few sentences fall agreeably enough, but he runs on and on and on. Suffering patients are in the waiting room, but this man's tongue wags forever. He is really a good talker, and, at another time, I should delight to listen to him. But he lacks the judgment to be terse on this occasion. At last a patient, an old lady who has long since learned the value of "push," thrusts open the door and querulously remarks, "Doctor, I'm the third in line, and if everyone before me takes the time of this un, I'll not get home before to-morrow midnight." Then my interesting talker without judgment collapses.

Well, he was rather a satisfactory patient anyway, at all events quite a contrast to the one that follows.

He enters with an air of great anxiety. "I have come," says he, "to ask you to refer me to the best oculist in St. Louis."

I reply that I also am an oculist.

"I know, Doctor, but this is for an operation. I need, I fear, an operation."

"But I also operate."

"Yes, I know, but this is a serious matter."

The fellow, for such he proves himself to be by his every sentence, even to the last, is finally got rid of. His memory, lingering, forces upon me the disagreeable generalization that all the trials of this long day are matters hardly so much of ignorance

as of sheer bad manners. People know enough to do better, if they were only better bred. And I am forced to wonder, too, if matters have always been so, and whether they will indeed be so forever.

In the midst of my wonderings I am interrupted. There is ushered in the last, and by far the most satisfactory, of the spectacle patients of the day.

He is an intelligent farmer, a man truly typical of all that is good and desirable and honest and sensible in this country. Of good healthy brawn, he is of good healthy brain also. But his eyes hurt him. And he likes to read. So he comes to have the trouble righted.

A moment at the case and I see he needs atropine. I explain the necessity, and also the temporary inconveniences that follow the use of that drug.

"Whatever you say," he answers tersely, and with confidence.

An hour later I have his correction.

"How much to pay?"

So much.

He pays it.

A month later he hails me from a distance. "See all right now, Doctor," he says.

And that is all.

Yet I understand him.

And he understands me too. He has helped me, a very little. I have helped him, very much indeed. He knows which side the ledger the balance really lies. And he knows that I know it. He pays me, however, the compliment of not using words unnecessarily. I perceive (quite as well as if he had flung a large library of dictionaries at me to say it) that he does not regard me as a robber, that he knows that I understand my business, that a jeweler or a druggist with six weeks in an optical college does not, that he does not come for impossible insurance of diseased organs, that I am capable of conducting my examinations without advice or suggestion from my patients, that I like a man to be pleasant without at the same time stopping to talk me to death; and I appreciate his intelligence, and I love especially his economy of words. I rejoice, too, in the fact that there are more of him. For he has a wife and a large family; and they are all wise and intelligent like him. I shall never inform him, however, quite how highly I esteem him, for that would spoil the emotion, possibly him also. Yet, nevertheless, to-night, should I happen to be a praying man, I shall probably ask the good Lord to bless this noble gentleman and also all of his kind and kindred in every corner of the world.

ATHLETICS FOR YOUNG WOMEN.

By WILLIAM LEE HOWARD, M. D.,

BALTIMORE.

I am a strong advocate of athletic sports for both boys and girls. I am professionally convinced that the present activity in athletics, in baseball and football contests, has been the channel through which normal youthful energy has been properly directed and many a youth made into a self governing man who otherwise would have been a physical and moral nonentity. I am also an advocate of physical exercise for girls and young women, but strictly along sex lines. A medical critic who has seen much

abuse and injury from misdirected physical exercise among girls need not necessarily be an iconoclast.

Woman is physiologically other than man and no proper education can change her, but false education can pervert her, and misdirected physical exercise can injure her beyond recovery.

The pendulum has swung too far in this matter of athletics for young women, and the man who best realizes this fact is the physician who is also an athlete, for it is he who understands the biology and physiology of the sex, as well as the force and violence exerted in certain forms of exercise.

The scientific medical man deeply realizes that woman has characteristic differences from man in every organ and tissue. This fact is frequently ignored in large public schools, especially in the high schools, and it is among these institutions that the abuse of athletics is mostly seen.

Boys from 14 to 18 years of age are practically a physiological unit. There is, of course, among them all the different phases of growth and character during adolescence, but they can all be practically placed on the same line in physical exercise. It is vastly different with the adolescent girl. In a class of 100 whose ages vary from 15 to 18 will be found those who need absolute physical rest, others who need the careful advice of their physician, and a few who require plenty of physical exercise to submerge an excessive psychic energy which if not directed into physical channels will result in ruinous nervous excesses. In most private schools for girls these facts are recognized; here each girl is treated as a unit in physical exercise and the best results obtained. This cannot be done in the large public high schools.

It is unfortunate that in some of the colleges there exist a class of teachers who are apparently ashamed of their sex and will not acknowledge that woman is different than men. These teachers say a girl should try vaulting, high jumping, sprinting, and broad jumping, and make an effort to equal the record of man. These forms of exercise are dangerous and injurious to the young woman, especially to the nerve tensioned American girl, as I have reason to know, for many who think they have only temporarily strained their physical endurance have in reality injured their nervous systems.

If mothers would remember that there are many disturbances which, though they act primarily on the physiological functions, yet exert their direct effect on the psychic activities, they would be very careful what form of exercise their adolescent daughters are taking.

Girls should do no physical work except walking and swimming for the first year after puberty. This statement may appear radical, but it is founded not alone on my professional experience, but is the consensus of opinion among all physicians who have given this subject thought and examination.

Probably the best form of exercise for girls is swimming. Walking is normal, body developing exercise and should be regularly done, in the country if possible, with hill climbing to open the many unused cells of the lungs. Fencing is excellent for the fully developed woman, but inadvisable for the girl. Cold shower or sponge baths every morning will be of great benefit to most girls and women, but

not unless there is a glow on the skin immediately after, and a physical and mental feeling of exuberance.

However, every girl who is free from organic disease can derive the benefits from cold baths by commencing in the summer and keeping them up through the winter. She soon will look forward to her morning bath with pleasure. These baths will keep the skin fresh, harden the flesh and promote the flow of blood to the internal organs, a very necessary item in the health of women.

Any form of exercise that causes undue psychic excitement, such as personal contests or basket ball games between rival schools, is too great a strain on the developing nervous system; for in the adolescent girl every organ and tissue is trying to get adapted to the new life, and this will never bloom with all its rightful beauty and strength if deprived of one minute's growth of nerve power. The unavoidable psychic excitement accompanying contests where personal or team efforts are strained to win from rivals, takes force and activity from growing nerve cells, and the result will be a riotous rebellion in some part of the girl's physiological functions. It may be delayed until later life, but it will come, for Nature never forgives robbery or insult.

The desire to emulate young men in the more violent forms of exercise should be suppressed, and intelligently so, and those teachers who refuse to acknowledge that there is a marked difference in the sexes, and the great one during adolescence, should be dismissed from all control over gymnastics. It is to be deplored that such teachers are not uncommon, and unfortunate is the young woman who is forced to work under one of these antisocial individuals. I have had this fact poignantly placed before me in my capacity as medical adviser, and have seen nervous wrecks that were the result of forcing a finely strung, sensitive and neurotic girl to daily perform gymnastic feats because it was the ambition of the teacher to build muscle instead of developing a woman.

The confession of illness or indisposition is the last thing a sensitive girl will make. Especially is this so when her instructor happens to be a man, or there are boys in the class; and painfully struggling she goes on spending more nervous energy than she can afford. The result is that the girl seldom has any reserve nervous force, soon draws on her capital, and finally becomes one of those sad objects, a neurotic girl, and later on a suffering hysteric. Many of these conditions are the result of coeducation in the high schools, for I have had girls tell me that they could not avoid going through gymnastic exercises because it would cause comment.

There is a period when Nature wants to surround the young woman with all that is physically beneficial, and rest is most important if she wishes to store up energy for the time when the stress and storm of life comes.

Everything that moral example and hygienic instruction can do to develop the girl into a healthy woman should be done. The normal woman was not intended by Nature to be a high jumper or a performer on the trapeze, but to be a wife and mother, and with such a glorious future she should be so educated that her physical condition is always

a pleasure to herself and a blessing to her husband.
 "With a woman *to be* is better than *to do*."
 1126 NORTH CALVERT STREET.

GONOCOCCUS VAGINITIS IN LITTLE GIRLS.*

By W. D. TRENWITH, M. D.,

NEW YORK,

GENITOURINARY SURGEON TO OUT-PATIENT DEPARTMENT,
 NEW YORK HOSPITAL.

In presenting these cases I have made note only of those which I have been able to follow to the end, that definite results might be recorded.

Such cases as have disappeared after a few treatments, with declining discharge, I presume, have in many instances been looked upon as cured by parents, but no space is given to them in the annexed table of cases; nor are the cases presented selected ones.

In those cases reported as indirectly infected by the father, through the mother, I developed the fact that in each instance the mother had been troubled with a discharge which she called "leucorrhœa" or "whites" very shortly after her marriage, and examination of the husband revealed at the time of examination that the urine still contained shreds, threads, or other detritus, due to a previous gonorrhœa; or, if there were no present indications of a previous gonorrhœa, the acknowledgment of a gonorrhœa prior to marriage.

The evidence in other cases was very much more direct, as instances occurred where father, mother, and child were all suffering from acute gonorrhœa at the same time, the father being first afflicted, then the mother, and lastly the child.

In none of the cases cited as so infected was I able in any other way to account for the infection, though my inquiry was of the most searching character.

Probably the majority of cases of gonococcus vaginitis in little girls occur in families of the poorer class, where of necessity the sleeping quarters are crowded, the bathing facilities poor and adapted to the easy transfer of the gonococcus from the mother to the little girl by means of the sheets or wash rags, etc.

There are seven cases, or over 50 per cent. infected indirectly by the father, and I think in this series cases Nos. VIII and IX ought rightly to be included under the same, though infected by their sister with whom they slept. We should have then 75 per cent infected indirectly by the father.

In cases II, VIII, IX, and X the patients were infected by sleeping with a child already suffering from a vaginal discharge.

In case XI the patient was discovered to have a discharge a day or so after her return from a day nursery.

The following method of treatment was carried out in all the cases except as hereinafter stated. The mother was told to provide herself with a soft rubber catheter, not larger than No. 15, French, and given implicit instruction as to its sterilization, that is, to boil it for from five to ten minutes before

and after use. She also had to purchase a two quart fountain syringe bag, and by means of a medicine dropper she was able to effect very nicely a connection between the tubing of the fountain syringe, and the catheter. The bag was filled with a warm solution of potassium permanganate of the approximate strength of 1 to 4,000, then elevated some three feet or more above the level of the buttocks, the child reclining on a douche pan, with thighs flexed and abducted to full extent. The catheter, being then lubricated with chondrus jelly or glycerin, was introduced into the vagina, and the full amount of solution allowed to flow. This was done twice or three times a day, according to the severity of the case.

A solution of potassium permanganate of the strength of 1 to 100 was prescribed: 3vj of this to Oij of water gives a solution of the approximate strength of 1-4,000, and lends itself easily to any desired changes in the strength of solution to be used.

After the discharge became slight in amount and mucopurulent in character, the potassium permanganate was stopped and douches of zinc sulphate and alum, 3i to water Oj, were given morning and evening.

At each visit of the patient to the clinic, virtually the same treatment was carried out, making use, however, of a four ounce hand syringe and injecting eight ounces.

This was done not so much for the good which it did the child, but more for its moral effect upon the mother, and to insure the keeping up of the treatment. These cases are often long in getting well and the mother must be kept up to the mark in some way, else she neglects the treatment and the child suffers accordingly. What really seems to count is the frequent douching of the parts with large amounts of the solution, because the accumulated mass of infectious material is thus mechanically washed away, and the early institution of the treatment, for in every case where treatment followed promptly upon the discovery and diagnosis of the case, a cure was obtained in a comparatively short time. The long, hard cases were those brought for treatment after the lapse of some time.

When the discharge became slight, and the child was using the zinc and alum douches at home, upon the occasion of its visits to the clinic solutions of silver nitrate were used in strengths of 1-2,000, 1-1,000, 1-500, 1-250, 1-125; 3j to 3ss was injected into the vagina, using the child's own catheter and a small instillation syringe, and held in for a minute or two. This usually completed the cure.

The urethra in only two of this series became involved, with the consequent frequency of urination and bitter complaint of pain and discomfort during the passage of the urine, and followed occasionally perhaps by the passage of a few drops of blood. The application of a 10 per cent. solution of silver nitrate, on a suitable swab, directly to the inflamed urethra, while causing a great uproar on the part of the patient at the time of application, nevertheless sufficed to relieve the symptoms promptly and to cure the condition.

The bowels were of course kept active as much as possible by dieting. As to diet, the children be-

* Read before the Section in Pediatrics of the New York Academy of Medicine, December 14, 1905.

ing so young, nothing especial need be said, but of course acids, rich or greasy food, coffee, beer, etc., were prohibited if taken.

The mothers were instructed to keep the external genitals very clean, frequently washing the parts with warm water and castile soap, and the parts then dusted with talcum powder and boric acid, the object being to keep them as dry as possible.

The child should wear napkins made of bleached gauze, which can be frequently thrown away and replaced by a fresh one.

Cotton as a dressing is to be very much condemned; it becomes soaked with the secretions and mats over the parts, so damming back the discharge, which should be allowed to drain away as freely as possible.

The mother was always informed as to the infectious character of the discharge and the liability, if introduced into the eyes, of causing severe inflammation there, and as to the care she must give her own hands to keep them clean.

Cases V and VI resisted treatment for an undue

Case	Name	Age	Duration of Discharge	Microscopic Examination of Discharge	Mode of Infection	Length of Treatment	Character of Treatment	Result	Remarks
I	R. B.	2 years 7 months	6 months	Many gonococci	Indirectly by father, through mother	3 months	Irrigations with solution of potassium permanganate 1-4000, instillations of silver nitrate	Cure ¹	Examination 2 months later; no discharge; no gonococci.
II	E. B.	8 years	9 days	Many gonococci	From little girl having gonorrhea, and with whom she slept	2 months	Irrigations with solution of potassium permanganate 1-4000, instillations of silver nitrate	Cure	Examined 4 months later; no discharge; no gonococci.
III	A. D.	3 years	Previous attack 8 months ago. Present attack few days	Many gonococci	Indirectly by father, through mother	1½ months	Irrigations with solution of potassium permanganate 1-4000, instillations of silver nitrate	Cure	Treatment not carried out at home by mother. Examined later; no gonococci; slight mucoid vaginal secretion.
IV	M. F.	1½ years	12 days	Many gonococci	Indirectly by father, through mother	2 weeks	Irrigations with solution of potassium permanganate 1-4000, instillations of silver nitrate	Cure	Examined 2½ months later; no discharge; no gonococci in vaginal secretion.
V	H. H.	6 years	3 weeks	Many gonococci	Indirectly by father, through mother	9 months	Irrigations with solution of potassium permanganate 1-4000, instillations of silver nitrate	Cure	Examined several months later; no discharge; no gonococci in vaginal secretion.
VI	J. M.	5 years	10 months	Gonococci	Indirectly by father, through mother	8 months	Irrigations with solution of potassium permanganate 1-4000, instillations of silver nitrate	Very slight discharge which shows gonococci	Treatment carried out with care at home. Am unable to give course of treatment, but presume some glands or deeper structures had become infected.
VII	B. R.	5 years	9 months	Many gonococci	Indirectly by father, through mother	2 months	Irrigations with solution of potassium permanganate 1-4000, instillations of silver nitrate and alum douche.	Cure	No examination made later.
VIII	M. R.	4 years	4 days	Many gonococci	From case VII her sister	7 weeks	Irrigations with solution of potassium permanganate 1-4000, instillations of silver nitrate and alum douche.	Cure	Examined 2 months later; no discharge; no gonococci.
IX	J. R.	3 years	5 days	Many gonococci	From case VII her sister	7 weeks	Irrigations with solution of potassium permanganate 1-4000, instillations of silver nitrate and alum douche.	Cure	Examined sometime later; no discharge; no gonococci.
X	A. V. H.	4 years	2 days	Many gonococci	From her sister	6 weeks	Irrigations with solution of potassium permanganate 1-4000, instillations of silver nitrate	Cure	Examined 8 months later; no discharge; no gonococci.
XI	B. V. H.	1½ years	2 days	Many gonococci	Had been in Day Nursery only a few days before	6 weeks	Irrigations with solution of potassium permanganate 1-4000, instillations of silver nitrate	Cure	Examined 8 months later; no discharge; no gonococci.
XII	E. M.	10 years	8 years	Gonococci not demonstrated with certainty	Indirectly by father, through mother	3 months	Irrigations with solution of potassium permanganate 1-4000, instillations of silver nitrate	Cure	Examined 7 months later; no discharge; no gonococci.

¹ A patient is called "cured" only when gonococci can no longer be found in the vaginal secretion, and the discharge has ceased.

length of time. In case VI treatment was discontinued, the patient very much improved, but with a slight vaginal discharge, in which, however, gonococci could, with some difficulty, still be demonstrated. In case V the patient was finally discharged cured, having neither discharge nor gonococci. She has since reported to me, and the cure has been confirmed.

Just as in some cases of gonorrhoea in the male, so also in the female, certain cases in spite of every precaution, and the greatest care in treatment do badly, and resist all measures used, the reason undoubtedly being that the deeper structures of the parts are infected, more especially some of the numerous glands abounding in the vagina, sometimes also because the cervical canal or even the cavity of the uterus is involved. In such cases the exercise of great patience in keeping up the treatment seems to be the requirement most necessary.

The average length of treatment in the whole series of cases was four and one quarter months. Excluding cases V and VI, the average length of time required to gain a cure was three and one half months, and in the cases of primary infection, in which treatment was begun under two weeks, the average length of time to obtain a cure was only seven weeks, a result particularly gratifying when certain authors have said that a cure obtained in three and one half months was to be considered a brilliant one, and showing very clearly the urgent necessity for beginning treatment at the earliest possible moment.

Some of these little girls are very intractable and make so much fuss that the loving mother is influenced and does not carry out instructions, to the detriment of the child, as in case III. This little girl made such an uproar at home that the mother was but seldom able to introduce the catheter as directed, and so irrigate the vagina, though at the clinic I had but little difficulty in inducing her to submit to the procedure, the consequence being that seven and one half months elapsed before a cure.

I have yet to see a case of vaginitis in which the catheter could not be passed without damage of any kind to the parts; of course gentleness should be used and one should not attempt to introduce it further after it meets with obstruction in the vagina. The mother should be clinically instructed as to its use and should pass it once or twice in the physician's presence. After its use two or three times the child begins to gain confidence and to lose the fear which it at first had and which really seems to be at the bottom of all the struggling and crying which one must at first put up with. One gets along best with these little patients by being firm and yet gentle with them.

In view of the facts as to infection, as stated above, and of the facts concerning gonococcus vaginitis in little girls, brought out by Dr. Holt and others, as to its epidemic character, when once it makes its appearance in a babies' hospital or day nursery, we have good ground for inveighing against even one male patient remaining uncured of his gonorrhoea.

When it comes to infants and very young girls who, being perfectly helpless in the matter, are yet infected, it certainly does give rise to great indignation that such a thing should be possible, and I wish

to raise my voice in vigorous protest against the too common practice of a certain class of physicians who treat gonorrhoea in the male only until the discharge has stopped and the patient is then given to understand that he is well, though he, in all probability, is yet in an infectious condition, and of the common practice of druggists in also treating the same class of cases upon the same basis. In this way has grown up a widely spread belief among men that a "cold is worse than a gonorrhoea," and consequently there is not much fear of the latter, it is looked upon as an inconvenience only.

Occasionally, too, a mother brings her little girl suffering with a gonococcus vaginitis and volunteers the information that her former physician said of it, "It is all right. She will outgrow it!"

Is it not possible that a neglected child with gonococcus vaginitis, giving perhaps no symptoms, can grow to womanhood, marry, and be the cause of a gonorrhoea in her husband, to explain which we are in great difficulty to locate the origin of the disease and yet preserve the man and woman's reputation for chastity and truthfulness?

If in only a small way the fear of this disease is spread among some, even of the medical profession, I shall deem the time given to these cases and the preparation of this paper very well spent.

I wish to thank Dr. L. E. La Fetra, chief of the Children's Department, Vanderbilt Clinic, for having placed at my disposal the material of his clinic, my own private work and genitourinary services in New York Hospital, Out-Patient Department, and Vanderbilt Clinic yielding but comparatively few cases of gonococcus vaginitis; and also Dr. Ira S. Wile, clinical pathologist to the Children's Department, Vanderbilt Clinic, for his painstaking care in the microscopical examination of the specimens submitted to him in connection with these cases.

In conclusion, I wish to emphasize the following points:

1. The great need for early diagnosis and treatment.
2. The necessity for frequent douching with large quantities of the solution.
3. The nonuse of absorbent cotton as a dressing for the parts.
4. The need for care and gentleness in the treatment.
5. That a case should not be considered as cured until not only the discharge has stopped, but it is no longer possible to find the gonococcus in the vaginal secretions microscopically.
6. The need of impressing the mother with the serious nature of the disease and the necessity for treatment until the gonococci have entirely disappeared.
7. The greater dissemination of knowledge among those men and women who suffer from gonorrhoea, as to its infectiousness to others, and its power to do, at times, great harm, at a period remote from the time of primary infection when the disease remains uncured.
8. The great necessity for care in keeping cases of gonococcus vaginitis out of the day nurseries and babies' hospitals, because of the epidemic character which it assumes among the inmates once it has gained a foothold.

147 WEST SEVENTY-SECOND STREET.

TUBERCULOSIS OF THE APPENDIX VERMIFORMIS, WITH REPORT OF A CASE.

By H. A. HAUBOLD, M. D.,

NEW YORK,

CLINICAL PROFESSOR IN SURGERY, NEW YORK UNIVERSITY
AND BELLEVUE HOSPITAL MEDICAL COLLEGE;
SURGEON TO HARLEM HOSPITAL, ETC.

The question of the port of entrance of tuberculous infection and the route by which the tubercle bacilli gain access to the more remote portions of the body has been widely discussed. Bone tuberculosis is now quite generally regarded as embolic and secondary to some forms of tuberculosis in an organ readily accessible to invasion from the outside and so it is with solitary tubercle in the brain and tuberculosis in other parts, organs and tissues.

However, it is contended by a not inconsiderable number of observers that primary intestinal tuberculosis occurs quite frequently and indeed the writer has seen one case in which tuberculous adenitis was restricted to a single chain of mesenteric glands and no ulceration was present in the ilium in the area drained by the involved nodes. In this case the glands were removed by cœliotomy, the patient making an uneventful recovery.

Although tuberculosis of the intestine occurs late in the course of pulmonary tuberculosis, involvement of the cæcum is not so frequently seen: however, in 1835, Dupau reported a case of tuberculosis of the cæcum with perforation and peritonitis; in 1843 von Valy and in 1844 von Bodard gave a complete description of tuberculous typhilitis. In 1851 Albers stated that perforation of the appendix vermiformis did result from tuberculous ulceration, and in 1859 Leudet verified the fact. (These historical references are taken from an *Inaugural Dissertation* by Rudolph Bom, Berlin, 1897.)

Kelly, of Baltimore, has collected six cases of apparently primary tuberculosis of the appendix, all of which seem to have done better than my patient. In four, definite claim for complete recovery after appendectomy is made, and in two the patients were about and apparently well for a considerable period of time after the operation. In all of the cases the tuberculous nature of the infection was not learned until microscopical examination.

In none of the cases is allusion made to the condition of the omentum. It is well known that when localized peritonitis occurs from any cause, the omentum almost immediately becomes adherent at the site of the inflammation and this obtained in my case. It is easy to see how the infection would travel rapidly enough in the lymph vessels of the omentum and equally rapidly in the lymph nodes, in the right iliac fossa and soon cause pathologic conditions beyond the reach of the surgeon.

CASE.—The patient was a boy, 10 years of age. His mother died of nephritis; the father is alive and well; he has lost no brothers nor sisters. He has always been slender but active, and lived in the country all his life. He has never been seriously ill; indeed, there is nothing in the previous history nor environment which is generally regarded as predisposing to tuberculosis.

On April 20, 1904, the patient was seen for the first time by Dr. Zacharie, of White Plains, N. Y., and the following history was obtained: The boy had been up and around until that day, but had complained for about ten days of uneasiness in the abdomen, together with

constipation; the pain had not been severe enough to cause him to go to bed, until the day Dr. Zacharie saw him. At this time, examination showed a slightly distended abdomen with some tenderness in the lower right segment. These symptoms were quite relieved by free cathartics, but recurred two days later.

On May 1, 1905, the patient was seen by the writer, who found the conditions much as described; there was some rigidity of the lower portion of the right rectus and tenderness was most marked in the right iliac fossa; there was no palpable mass. The temperature was 100° F. in the rectum, pulse 120; the tongue was slightly coated with whitish film.

The next day the patient was removed to New York and an intermuscular cœliotomy in the right inguinal region was made; about a pint of milky fluid escaped from the peritoneal sac; the omentum was adherent to the appendix at its distal end. The appendix was much thickened with a hard exudate, as though injected with starch which had subsequently set. Appendectomy after the procedure advocated by Fowler was done, and the omentum deligated in section and removed. The writer noticed a peculiar "hard feel" to the omentum at the time of operation, but the fact did not arouse any suspicion. If there were any tuberculous foci in the peritonæum at this time, they escaped notice, although search was made for fibrinous exudate, and it is not improbable that tuberculosis would have been noticed for this reason. However, tuberculosis was not thought of and mention is made in this way for what it is worth. There was no free pus and the case was regarded as a rather low form of infection. The wound was closed without drainage. On section the lumen of the appendix was almost obliterated; the coats much thickened and there was no ulceration.

The patient made a good immediate recovery following the operation, but the wound showed no inclination to heal. It then occurred to the writer that the case was one of tuberculosis, and a few days later the report from the pathologist, Dr. Rogers, verified this belief. Dr. Rogers found the process in both the appendix and omentum to be tuberculous.

The boy remained in the hospital for three weeks and then returned home with a large fistula at the site of the operation; communicating with the peritoneal sac, but not with the lumen of the gut; which suggests that the portion of the cæcum from which the appendix was removed healed. The abdominal wound never entirely healed. The patient gradually emaciated, constantly running a low fever. At no time did it appear that infection with pyogenic bacteria developed.

The writer saw the boy again about six weeks after the operation; he had been removed to a "shack" built on a mountain, and was dosed with milk and eggs, and alcohol. However, examination revealed considerable enlargement of the intraabdominal lymph nodes and the fistula, of about the size of the circumference of the index finger still persisted, discharging thin yellowish fluid; there was no fluid in the abdomen, due no doubt to the fact that the fistula discharged it as soon as produced by the tuberculous inflammation.

A rather careful examination of the lungs at this time did not reveal any indication of pulmonary tuberculosis. There was no cough and no expectoration. A few weeks later, about nine weeks after the operation, the patient died. An autopsy was not performed.

616 MADISON AVENUE.

Chloroform.—Chloroform should not be administered too close to a gas jet or gas stove, as its vapors are thereby decomposed, forming products which when inhaled by the patient, surgeon, and assistants may give rise to disagreeable and even serious effects, such as nausea, vomiting, and pulmonary and renal irritation. —*International Journal of Surgery.*

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at frequent intervals. So far as they have been decided upon, the further questions are as follows:

XLVI.—How do you treat a sprained ankle? (Answers due not later than January 15, 1906.)

XLVII.—How do you treat whooping cough? (Answers due not later than February 15, 1906.)

XLVIII.—How do you treat pruritus ani? (Answers due not later than March 15, 1906.)

Whoever answers one of these questions in the manner most satisfactory to the editors and their advisors will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but not REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLV has been awarded to Dr. William Warren Potter, of Buffalo, whose article appeared on page 139.

PRIZE QUESTION NO. XLV.

INTERSTATE RECIPROCITY IN LICENSING.

(Continued from page 195.)

Dr. J. McPherson Scott, of Hagerstown, Md., remarks:

Of overshadowing importance to the registered physician are the limitations under State regulation of medical practice affecting his removal from one state to another, as pleasure, health, superior professional opportunity, or any of the many influences governing life may suggest. Under existing legal conditions his transmigration to another field of effort is dependent upon the comity existing between the States known as interstate medical reciprocity.

The consideration of "How it may be best accomplished" should involve acceptance of the basic principles underlying State regulation of medical practice, viz.—the uplifting of the profession to a higher plane of intellectual attainments and professional character and the consequent advantage arising therefrom to the public. Registration, and the legal status it secures to the physician and surgeon, is dependent in one class upon practice antedating regulation of medical practice, and, in the other class, upon the possession of a license issued as result of successful examination before a board of medical examiners. The preliminary requirements in the latter procedure present and emphasize the relationship existing between the profession and the public, and in the consideration of this, or any other question arising out of this relationship, the underlying and fundamental principles to which allusion has been made, should be respected. With these premises established let us pass by the ordinary

practice of mere recognition of a State license (as a means of securing registration in another State) as not in harmony with the establishment and maintenance of a higher standard of professional capability and character, and therefore defective and unsuited as a basis upon which a just comity in the interest of the profession and the public should rest.

In the consideration of this subject physicians may be thus classed:

(1.) Those registered as result of examination held by a State board of medical examiners.

(2.) Those registered by virtue of practice antedating statutory regulation of medical practice.

Both classes are interested in the adoption of a procedure which would be easy for the physician, protective to the public and preservative of the general reputability and character of the profession. A careful examination of the laws of the various States discloses recognition of license as the prevailing method of securing admission from one State to another. In some of the States there is no provision whatever made for the recognition of class (2), and the physician who has been long in practice and through years of service won capability and reputation, finds himself barred from removal to another State.

The injustice of this discrimination is unbearable. The law of one State, particularly (Maryland), and possibly another (New York), however, presents an admirable provision whereby the difficulty is overcome, and the physician who has garnered knowledge at the bedside and had character moulded in the crucible of duty finds himself welcomed in this state by the simple presentation of proofs of practice and reputability. The control of removal into Maryland is lodged in the board of medical examiners through a special examination which, in the discretion of the board, may be granted to physicians of other States desirous of acquiring residence in the State named. The authority is broad and liberal. While the usual method of extending comity by recognition of license is authorized, and places Maryland in harmonious relation with sister States, its exercise is not obligatory upon the board of medical examiners.

The law of Maryland reads: "Physicians and surgeons of good moral and professional standing who shall hereafter come into this State with intent to follow the practice of medicine and surgery within this State, being graduates of a medical college or university of good standing, or having a certificate or license from a board of medical examiners of any State where the requirements for practice are equal to those required by the board named in this article, may make application to the president of either board of medical examiners of this State, which application shall be made under oath and shall state when and how long said applicant has been engaged in the practice of medicine and surgery, and from what medical college, university, or other institution of learning he or she graduated, and thereupon the board of medical examiners may require said applicant to submit to a special examination, the terms and methods of which shall be prescribed by the board of medical examiners. After the examination and determination of said board thereupon, that said applicant is qualified to practise medicine and surgery and that he is en-

titled to a license, a license shall be issued to him." Under the authority thus granted to hold this "special examination" under such "terms and methods" as the board may prescribe, physicians of other States have been licensed in Maryland under an examination designed to ascertain their general capability and determine their moral character and professional standing as established in the locality where they have previously practiced.

The physician who has been engaged in practice and has made his reputation should realize upon his capital. Under the Maryland law such an asset is measured at full value and the owner spared the anxiety and possible humiliation of a technical examination upon details which have been forgotten or displaced by the more valuable lessons of practical clinical experience. And while the procedure thus outlined favors the physician, its exercise saves the profession of the State in which residence is contemplated the engrafting upon it of the incapable and unworthy. Since its enactment, a decade since, but one man coming into Maryland under its provisions, has proven undesirable. This degree of excellence has not been maintained among those who have come into the State through reciprocity based upon more recognition. In the opinion of the writer the only objection that can be lodged against this system is that it clothes the board of medical examiners with too great powers which might be abused. Power, however, must be lodged somewhere, and it is safe to declare that this authority will be as wisely and justly exercised as any other with which the board may be entrusted.

Believing that the proceedings attending the removal into another State, under interstate medical reciprocity, should be characterized by simplicity and celerity so that the physician should not be hampered or delayed; that the capability and character he has acquired should be his passports to the respect of the profession in his new home, and that the public should be protected from the incoming of the incapable and untrustworthy, I have made careful investigation of the laws upon this subject, and believe that in the "special examination" feature of the Maryland law I find "How interstate reciprocity in licensing may be best accomplished" in the interest of the physician, the profession, and the public.

Dr. Rudolph H. Wald, of Boston, observes:

Obviously, the one thing needful is legislation. All efforts then, if they are to be of any use, must bear directly or indirectly toward securing appropriate legislation. Since the general public has not a degree of medical or scientific training which enables it to detect any except the grossest forms of malpractice and quackery, it seeks, quite properly, to protect itself, as well as those best qualified to practise medicine, by legislation.

But the very condition which makes legislation necessary reacts against the medical profession, since it is unable to present any claims to a disinterested jury of its peers, but must go before the very public which cannot properly weigh honest evidence on medical matters against that of clever frauds.

Consequently in influencing legislation at the present time there is, in general, but one asset which

the medical profession can rely upon, and that is character. Moreover, this is likely to remain always foremost. Achievements may in time be so presented as to have a close second place.

Disregarding the present anomalous conditions of registration and licensing throughout this country, the legitimate methods of influencing legislation tending toward the accomplishment of interstate reciprocity may be put under the following headings:

First, direct influence: This is always potent and practically the universal method, and consists of personally stating the injustice, the hardships, the uselessness, and above all the inadequacy and narrow provincialism of the present system to every legislator as well as to influential public spirited citizen and voters in every community by physicians themselves. But right here the potency of character and standing will weigh heavily, and many who might do much will remain inactive, as they are the successful, established practitioners who have no personal interest in interstate registration. It is the younger generation which would benefit most by the desired reform. Nevertheless, the whole history of medicine is one of effort by the most eminent for the improvement of the condition of all, and the number of those who not only can but will interest themselves is greater than ever before.

Second comes indirect influence, brought to bear upon the general public in the old way, by literature. This should be popular, if necessary, but at all events should state the common sense facts. A campaign of education again. Much that appears in the current medical journals bears directly upon the subject and would be reprinted in all kinds of journals on personal request by physicians to various editors of their acquaintance. This indirect method is a slow way but a sure one in the end, though it has the disadvantage of being equally open to all, since the general public cannot discriminate, and does not distinguish the pseudo-medical or scientific journals from the genuine and authentic.

Again, it is character which will win in the end, and the names of the eminent and influential are needed as a criterion of reliability by the public. Therefore this class of men in our medical societies should be formed into committees for active effort in bringing appropriate literature to public notice. Under these two headings the field of effort is outlined.

As to the details of legislation which would further interstate reciprocity, supposing the present system of individual state examination is to be retained, there must come first an agreement as to certain standard requirements of examination for registration among as large a number of States as possible, and then reciprocity in licensing among those States, as a nucleus, which more States can be induced to join.

Efforts toward reciprocity among individual pairs of States would not tend directly toward general reciprocity, and to that extent would constitute a waste of effort.

Having said so much in direct reply to the question as put, may I now suggest that the line of effort required to accomplish what is termed "interstate reciprocity in licensing" might be exerted to

a better purpose in working for a simple, comprehensive set of national government examinations, held as civil service examinations are held, in various places simultaneously, which would license qualified individuals to practise anywhere in the United States.

But before striving for this alone, should we not consider whether any set of examinations, either State or national, can determine fitness to practice medicine? In too many States the ability to answer a long list of more or less superannuated questions on paper is all that is required. Probably in all States there are individuals who teach the answers to this class of questions to all comers for a fee. Also, there are books wherein hundreds of such questions are given, with the appropriate answers, for the benefit of all who wish to learn them. Possibly it is because of an attempt to remedy this that it seems as if in some States scores of questions were being asked, bearing upon points of infinitesimal importance, necessitating the temporary commitment to memory of an enormous number of minor facts by the candidates for registration. A few States, however, notably in the West, have taken a more enlightened view, inasmuch as they admit to registration graduates of certain schools without examination. I say enlightened, because it seems as if there had been a realization that no series of questions can compare with a four years' course including the practical experience obtained in a medical school of the first class.

Legal requirements of good character, etc., with regard to fitness for the practice of medicine, are practically a dead letter, since, excepting possibly in an occasional flagrant case, they are necessarily even less inquired into by State examining boards than by medical schools.

Better than any examination of individuals would be proper, continuous government supervision of the medical schools by medical and scientific men of national standing, with regard to the time spent in instruction, the actual clinical and laboratory work done, as well as the character of examinations and tests given the students throughout their whole course.

If a State desires to satisfy itself regarding an individual's fitness to practise medicine it can do so to much better purpose by observing him for four years in a medical school under qualified instructors, than by any system of questioning extending over a portion of a few days. Furthermore, State or government examinations could be combined to advantage with the school's examinations in each subject.

Such continuous government supervision would soon dispose of many schools where requirements and practical teaching are at a low ebb, and this would be to the advantage of the students who do not know that they are getting less than they are entitled to, as well as to the profession to whose ranks half trained men are constantly being added.

But all this makes no provision for licensing non-graduates. For such presumably there must be some form of examination retained. But I believe that the right to practise anywhere in the United States can be obtained for graduates of the best schools, without subsequent examination, by properly directed efforts in presenting the facts to the public and to legislators.

Dr. W. Peyre Porcher, of Charleston, S. C., answers the question by saying:

The only real solution of this question seems to be the entire elimination of the competitive element. These examinations are in no sense competitive, as they are intended alone to determine if the applicants are competent to practise medicine and surgery, and indirectly to protect people against the output of colleges whose standards are low, or where, on account of favoritism or other inducements, students are allowed to pass who are illiterate and incompetent, and who would be a continual menace to any community, or to persons whose lives might be intrusted to their care. It is not infrequently found that physicians appointed on examining boards, puffed up by their temporary prominence, attempt to further magnify their importance by asking catch questions, in order to get a reputation for being unusually strict in their requirements. Such questions should not be tolerated, because when students come before the board with an honest and high minded desire to carry out the highest ideals of their profession and therefore begin by conforming to the law, the examiners should make their questions of the most practical character, and only such as every well informed physician should be familiar with.

If this rule were adhered to, every State would be willing to grant reciprocity to the other States, because there would be no fear that the standard of one board might be slightly lower than that of the other. Neither would the boards operate to exclude competent physicians from practising or to limit the number of physicians in a State, as is supposed to have occurred in some instances. In order to remove the competitive element it would be necessary to have a standard number or grade, having received above which, the student is permitted to pass, and below which he is rejected. This could easily be fixed, there would be one established grade, and college graduates having passed a four year curriculum which should be established by law, and also a fixed grade before the State examining board, would then be allowed to practise in any State or Territory.

(To be continued.)

Correspondence.

LETTER FROM TORONTO.

A New Board of Trustees for the Toronto General Hospital.—The Toronto Free Hospital for Consumptives.—Smallpox in Ontario.—The Ontario College of Physicians and Surgeons.—The Toronto General Hospital.—Dominion Registration.
TORONTO, January 15, 1906.

An important meeting in connection with the proposed new general hospital for Toronto was held during the past week in the Ontario Parliament Buildings, at which were present representatives of the various interests in connection with that institution. The special object of the meeting was to receive the report of a subcommittee which had previously been appointed to confer with the present trustee board as to a new constitution for the hospital, a site for the

new building, and the selection of an architect. It was decided that a new board of trustees should be established to consist of twenty-five members instead of five as at present. Of this number the Ontario government would appoint eight, the University of Toronto five, the city of Toronto five, and the benefactors seven. An act of incorporation is to be put through the coming session of the Ontario legislature, which will provide for power to be given the trustees to erect and equip the new main hospital building, and also to erect a suitable building for the Burnside Lying-in Hospital, as well as to make necessary provision for the Andrew Mercer Eye and Ear Infirmary, both of which institutions are now under control of the Toronto General Hospital. The status of benefactors will also be set forth in the act of incorporation, which will provide that anyone who prior to the passing of the act of incorporation on the part of the Ontario government, contributes \$500.00 for the purposes of the institution, or \$1,000.00 after the incorporation thereof, shall be a benefactor of the institution. The act will further provide that any student in medicine of Toronto University shall be allowed to visit the wards, a privilege which shall be confined to the medical students of Toronto University alone. All patients paying sufficient to cover the entire cost of their maintenance shall have the right to employ their own physician or surgeon subject to the regulations of the board of trustees. The present board of trustees shall continue to administer the affairs of the hospital until the new board is constituted and established by act of Parliament.

The first annual meeting of the Toronto Free Hospital for Consumptives' board of trustees was held in Toronto on the afternoon of the 13th of January. This institution, as well as the Gravenhurst Sanatorium and the Muskoka Free Hospital for Consumptives, is under the control of the National Sanatorium Association. At the two hospitals in Muskoka only patients in the incipient stages are admitted, while the Toronto institution is for patients in the advanced stages of the disease. The Ontario statutes require that a hospital for the treatment of patients with tuberculosis must be situated at least 150 yards from any habitation; and a suitable site for the Toronto Hospital, after much trouble, was found about ten miles from the city. On the 30th of September last it completed its first year of work, and during that time it attended to 136 patients. It has been visited by over 5,000 people, thus showing that the people of Toronto and the surrounding community take a deep interest in the welfare of the tuberculous. An extensive addition is now in course of erection at a cost of \$20,000, which will bring the accommodation up to the neighborhood of 100 patients. In presenting his annual report Dr. Allan Adams, the physician in charge, made an encouraging deliverance. He states that their experiences for the year would lead him to predict that from 50 to 60 per cent. of even advanced cases ought to be cured and restored to the community healthful and valuable citizens. Altogether about \$50,000 has been expended upon this institution.

In several sections of the Province of Ontario during the past three months there have been a good many cases of smallpox, and even the city of Toronto has suffered to the extent of twenty cases more or less. The fact that the cases have all been of a mild character, and more than ever before simulated chickenpox, has probably caused some physicians to be a trifle careless, hence the continued spread of the disease. While a member of the Board of Education of the city of Toronto is calling upon citizens for their opinions seeking to thus do away with compulsory vaccination of all school children, except those attending separate schools, who under the provisions of the act are exempt from vaccination, and having in view the prevalence of the disease throughout the Province, the secretary of the Provincial Board of Health, Dr. Charles A. Hedgetts, has considered it necessary to call the attention of the public and physicians as well to the provisions of the law respecting vaccination. This requires in Ontario that within three months after birth the parents shall present their child for vaccination before one properly qualified to perform such operation, and again on the eighth day for verification. The medical practitioner who performs the same shall give a certificate to the parents and shall also send a duplicate to the clerk of the municipality. Dr. Hedgetts also points out that the trustees of the hospitals throughout the Province make no provisions for complying with the letter of the act.

The building of the Ontario College of Physicians and Surgeons, situated in Toronto, has been sold for \$100,000, and the college will erect a new building for the sole purposes of the college alone. It will most probably be erected in the neighborhood of the University and Hospital buildings.

The Medical Faculty of the University of Toronto has donated \$50,000 to the proposed new Toronto General Hospital. The fund subscribed for this new hospital now runs over \$1,000,000. Ex-Mayor Urquhart, on leaving office, contributed \$100.00 for the same purpose, establishing a special fund to which he invited 999 other citizens of Toronto to contribute.

A large delegation of medical students recently waited upon the Honorable the Minister of Education, Dr. R. A. Pyne, who still holds the office of registrar of the Ontario College of Physicians and Surgeons. They asked that the necessary ratification legislation be introduced into the Ontario legislature as provided for Dominion registration under the Canada Medical Act, better known as the Reddick bill. This legislation was refused by the Quebec legislature, and has been passed by all the Provinces with the exception of Ontario, British Columbia, Saskatchewan, and Alberta. It has never been introduced into the Ontario legislature.

Physician's Consultation by Telephone.—In the States of the German Empire there is a tariff regulating the charges to be made by the physician, giving a high and a low mark. To this has been added lately the following remark: Physician's advice by telephone is to be charged as a visit to the office.

Therapeutical Notes.

Multiple Warts.—Dr. Mantelin recommends the following prescription in the treatment of multiple warts:

℞ Chloralis hydratis, }āā 5iss;
Acidi acetici, }
Spts. etheris, }aa 5i;
.....5iv.

Apply locally to the warts twice daily.

Epistaxis in Hæmophilia.—In addition to local treatment, Anton Wiesner (*Pharmakologische und Therapeutische Rundschau*, 1905) recommends the following formula:

℞ Calcii chloridi,4 parts;
Syrupi papaveris,20 parts;
Aquæ destillatæ,100 parts

To be taken in tablespoonful doses, in the course of the day, to promote the coagulation of the blood.

Gelatin in the form of jelly, given in large quantity, is also useful; it can be made more acceptable by adding syrup of orange peel or of raspberry.

Hæmorrhage from the Lung Controlled by Parenchymatous Injection of Adrenalin Hydrochloride.—During a discussion before the Société médicale des hôpitaux de Paris (*Bulletins et mémoires*, December 28, 1905), M. Gaillard mentioned a case of phthisis, suffering with a copious pulmonary hæmorrhage, in which the intrapulmonary injection of half a milligramme ($\frac{1}{128}$ grain) of adrenalin promptly arrested the bleeding. The injection was made in the second left interspace, and the needle entered the cavity from which the hæmorrhage arose.

Hypertrophy of the Tonsils.—*Bulletin général de thérapeutique* gives the following prescriptions:

℞ Acidi carbolici pur.,1 part;
Resorcini,8 parts;
Spir. menthæ piperit.,20 parts;
Glycerini,30 parts;
Aquæ destillatæ,450 parts.

Misce. Sign.: Gargle.

In cases of a granular infection of the tonsils, the following gargle may be used:

℞ Jodi,0.4 part;
Potass. iod.,0.8 part;
Syrup. menthæ piperit. (French pharmacopœia),
.....50 parts;
Aquæ destillatæ,250 parts.

Misce. Sign.: Gargle.

Acute Coryza Treated by Anemone.—P. Vigier declares that the best preparation of pulsatilla is the tincture of the fresh root. The anemone should only be used in the fresh state, and the root should have the preference, as it contains more of the active principle than other parts of the plant. The tincture (alcoholature) is made by macerating one kilogramme of the fresh root in one kilogramme of alcohol (90°) for fifteen days; it is then expressed and filtered. This preparation is given in doses of 2 to 4 grammes per diem. It may be given as follows:

℞ Tincturæ anemonis radicis,5 parts;
Syr. aurantii florum,95 parts.

M. Dose: Two to three tablespoonfuls a day (each containing about one gramme of the tincture of the fresh root.)

Journal de médecine de Paris.

Treatment of Goitre by Iodine and Camphor Solution.—An American physician, Dr. East, living in Burmah, was called upon to treat a number of the natives who were suffering with goitre. He used a concentrated tincture of iodine to which he added camphor to saturation. In 300 cases he had very good results. Several paintings of this solution upon the goitre were followed by rapid diminution of the swelling, and ultimately caused even large goitres to disappear entirely. After a year and a half they showed no evidence of returning. The applications did not produce blistering in the natives, but for persons with more sensitive skins the ordinary official iodine tincture is strong enough.—*La Semaine médicale*, January 3, 1906.

Therapeutical Effects of Lumbar Puncture.—The Paris correspondent of the *Berliner medizinische Klinik* (December 17, 1905), states that at the last meeting of the Société médicale des hôpitaux, G. Thibierge and P. Ravant reported a series of cases of Wilson's lichen, prurigo, and eczema pruriginosum in which, after one or two lumbar punctures, the itching had ceased entirely or had substantially disappeared. They also exhibited a patient, 60 years of age, who for two years had suffered from an extensive and very itching psoriasis. Two lumbar punctures brought about a notable diminution of these annoying symptoms. It was observed in the discussion by Brocq that the favorable results of the lumbar puncture in these cases prove that the nervous system plays an important rôle in the pathogeny of pruritus and lichen.

Amyl Nitrite Inhalations for Hæmoptysis.—Sonlier and A. Pie (*Lyon médical*, December 3, 1905) report their results from the use of amyl nitrite in four cases of hæmoptysis. In all of the cases, the bleeding very rapidly disappeared after the inhalation of from 3 to 10 drops of the remedy. The customary dose, which may be regarded as the average, was 6 drops. Larger quantities caused evidences of hyperæmia of the brain (noises in the ears and vertigo), but no serious symptoms were observed. In experiments upon animals, it was shown by the manometer, that amyl nitrite lowered the blood pressure in the aorta, but increased it in the pulmonary arteries. The authors, therefore, affirm that the hæmostatic effect of the amyl nitrite in hæmoptysis, depends upon two components; general peripheral vasodilatation, together with vasoconstriction in the lungs.

Hydrogen Dioxide in the Gastrointestinal Affections of Infants.—J. Aguila Jardau (*Revista de medicina y cirugía practica*, Madrid, September, 1905; *Revue de thérapeutique*, January 1, 1906) uses the following:

℞ Aquæ hydrogenii dioxidi,60 parts;
Sodii chloridi,5 parts;
Sodii phosphatis,3 parts;
Sodii bicarbonatis,0.50 parts;
Aquæ destillatæ,ad 1,000 parts.

The distilled water should be recently boiled. With this solution the stomach is to be washed out two or three times a day, preceded by an irrigation of the rectum with boiled water. Under this treatment, with regulation of the diet, and

the administration of a half teaspoonful of solution of hydrogen dioxide in milk every three hours, improvement took place in his experience very rapidly. The hydrogen dioxide in these cases seemed to act not so much as an antiseptic as it did as an enepctic, although its bactericidal properties are also unquestionably valuable.

Treatment of Lithæmic Migraine.—P. Hartenberg (*La Presse médicale*, January 17, 1906) recommends electric cataphoresis in arthritic migraine of classical type (not ordinary headache), but rheumatic or lithæmic. He applies around the neck a gauze compress wet with sodium salicylate (5 per cent. solution), which is connected with the negative pole. Upon the surface of the abdomen, thighs, or back is applied the anode. The current, 15 to 20 milliampères, is allowed to pass for half an hour. Under this treatment (the salicylic acid being absorbed at the negative pole) the cervical rheumatism rapidly diminishes. At the end of twenty séances, recent swellings have disappeared, and the tenderness has left the muscles. The chronic nodes and ganglions of the infiltrated skin resist longer, but finally likewise dissolve under this form of local treatment, which is also efficacious in overcoming cervical myositis of rheumatic origin.

A Contribution to the Therapy of Syphilis.—Dr. Kahane, of Vienna (*Wochenschrift für Therapie und Hygiene des Auges*, December 28th), points out the fact that recent investigations have placed syphilis definitely among the protozoan group of infectious diseases, along with malaria and relapsing fever. Mercurial treatment, while it delays the secondary phenomena, does not prevent them entirely. Since in other protozoan diseases, especially intermittent fever, these remedies have been found to favorably influence the disease, he urges the trial of the following combination in recent cases of syphilis infection:

R Quinina sulphatis, /āā 6 grammes;
Methylthionina hydrochloridi, }
Arsenii trioxid.,0.003 gramme;
Ext. glycyrrhizæ,qs;
Met. ft. pil No. xxx.

Sig.: Take one pill three times daily.

Kahane urges the trial of this formula in primary syphilis in cases that have had no other treatment, in order to determine positively whether or not it may have a preventive action. Possibly it may exert an influence upon the morphology and biological reaction of the spirochætæ pallidæ, which will be ascertained by future investigations.

Successful Treatment of a Case of Traumatic Tetanus from Injury to the Orbit.—Dr. Grünfeld, in the *Prager medizinische Wochenschrift* (No. 48, 1905), reported an interesting case of a boy, who, while carrying a short stick in his hand and trundling a hoop, fell in running and thrust the end of the stick into the nostril. The boy forgot the accident and, nine days later when symptoms of local inflammation had developed, he came into the hospital for treatment. No history of the injury was obtained, and an examination of the nose gave, at that time, no indication of a

foreign body. But there was œdema of the left eyelids, chemosis, and outward rotation of the eye ball. There was no obstruction to breathing, and no purulent discharge from the nose. The symptoms of tetanus developing, a more careful examination of the nose was made, and protruding from the sæptum, opposite the right middle turbinal, was seen the end of a piece of wood. This was withdrawn with the forceps and found to be 4 centimetres in length. It had entered the right nostril, pierced the sæptum, the ethmoidal process of the left superior maxilla, and had entered the left orbit. After its removal the parts were frequently irrigated. Internally chloral hydrate and bromides were given, and convulsions were controlled by the warm wet pack and quietude. In six weeks after the accident the boy was allowed to go out, as he was entirely well. It was noteworthy that the case was not attended by high temperature, which, in the opinion of the reporter, showed only a slight degree of mixed infection, and afforded a favorable prognosis.—*Wochenschrift für Therapie und Hygiene des Auges*, ix, 13.

Treatment of Purpura Hæmorrhagica by Adrenalin.—A report was presented at the meeting of December 22, 1905, of the Société médicale des hôpitaux de Paris by Marcel, Labbe, and Amenille, of the case of a sewing woman, 27 years of age, who suffered with some form of nervous disease (disseminated sclerosis), and who in consequence of a fall from her bed began to have hæmorrhage from the gums and ecchymoses upon the limbs. This was soon followed by metrorrhagia and vomiting of blood. These symptoms were not checked by the administration of calcium chloride and hypodermic injections of ergot. The state of the patient became serious, with imperceptible pulse, a litre of artificial serum was injected, and three fourths of a milligramme ($\frac{1}{80}$ grain) of adrenalin was given hypodermically. Some chloroform water was given by the mouth. Soon after the hypodermic injection of adrenalin, the hæmatemesis ceased and the vaginal bleeding greatly diminished. The next day one milligramme ($\frac{1}{64}$ grain) of adrenalin was given in divided doses. There was no more hæmatemesis and the bleeding of the gums stopped. A return of the hæmorrhages on the following day led to repetition of the treatment with ice, immobilization, calcium chloride (4 grammes), injections of adrenalin (1 milligramme), and of one litre of normal salt solution, which was again successful, and definite recovery followed. As a result of the disease, the patient was made very anæmic. The changes in the blood were carefully studied. The condition was regarded as of the same type as those described by Werlhof. A mycloid reaction in the blood was recognized, but it was a late phenomenon of short duration, and its appearance coincided with the appearance of new blood when the losses from the repeated hæmorrhages were being made up by the blood making tissues. It was regarded as an incident of repair, and therefore did not constitute a special form of hæmorrhagic purpura, as had been claimed by Lenoble.

NEW YORK MEDICAL JOURNAL

INCORPORATING THE

Philadelphia Medical Journal
and The Medical News.*A Weekly Review of Medicine.*

Edited by

FRANK P. FOSTER, M. D.,
and SMITH ELY JELLIFFE, M. D.

Address all business communications to**A. R. ELLIOTT PUBLISHING COMPANY,**

Publishers.

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, FEBRUARY 3, 1906.

THE MEDICAL SOCIETY OF THE STATE OF
NEW YORK.

The feature of the celebration of the hundredth anniversary of the foundation of the society was the fact that the medical profession of the State was once more united. Prominent members of the medical profession who had never attended a meeting of the society before were present, and veterans of the days before disunion gathered for the first time in over a score of years. It was well that Odd Fellows' Hall was secured for the sessions, for, though its capacity is more than three times that of the room in the city hall in which medical society meetings have been held for so many years, it was tested to the full at the afternoon session of the first day. The evening session of the same day drew probably the largest number that has ever attended a medical function of any kind in the State of New York.

The cordiality of the greetings of those who had been members of the rival organizations was a noteworthy characteristic, and its full proportion of attendance all through the sessions was contributed by the former New York State Medical Association. Of the completeness of the reunion there could be no doubt, and it is very evident that the profession of the State is about to enter on a career of usefulness to its members and the commonwealth that will make for betterment in every line. The details of organization are still in the hands of the *ad interim* House of Delegates, consisting of the officers and the members of the committee of conference, to

whom the task of arranging all matters was delegated by the court until the annual meeting in 1907.

The scientific part of the sessions did not suffer in interest from preoccupation over the centenary celebration. While the usual "symposia" are missed from the programme, a number of practical papers of general interest were discussed so freely and by clinical observers of such experience as to create the "symposium" atmosphere. This can be seen particularly in this week's *Journal* in the discussion of the use of cycloplegics, of the correction of muscle insufficiencies, and of refraction problems generally evoked by the first paper of the session. It is evident that the combined organizations have entered upon an era of fellowship and good will from which much can be expected for science as well as for professional advance.

THE TESTICLE AS A DUAL ORGAN.

Those functions of the testicle that are distinct from the process of elaborating spermatozooids appear to have received more study at the hands of our French colleagues than from others. Some of the French writers carry the distinction so far as to describe the testicle as consisting of two separate organs. This conception is well exemplified in an article contributed by Ancel, of Lyons, and Bouin, of Nancy, to the *Presse médicale* for January 13th. These authors apply the term seminal gland to that portion of the testicle which produces the spermatozooids, and the name interstitial gland to that portion which is credited with other functions, chiefly that of furnishing to the blood an internal secretion. The two writers mentioned do not, indeed, seem satisfied with the word interstitial, but prefer to use the word diastematic (*diastématique*), from διαστήμα, an interstice. When the functional activity of the interstitial elements is defective, they call the condition diastematic insufficiency, and if there is complete lack of such activity, there is said to be adiaستماتία (*adiastématie*). Testicular insufficiency, therefore, according to them, is divisible into spermatic and diastematic insufficiency. Either of these forms, they say, may affect both testicles or only one.

Spermatic insufficiency, even amounting to complete azoospermatism, is normal in old men. The result, of course, is barrenness, a condition that is often brought about in younger men by occlusion of the vasa deferentia as the consequence of pathological processes. When that happens there is not necessarily any defect of the secretory function itself; only the specific product of glandular action is prevented from gaining

egress from the seminal canals. In certain cryptorchids also the spermatic gland may be said not to exist, although the interstitial gland is normally developed and possessed of full functional activity. The authors think that the interstitial gland may undergo compensatory hypertrophy; for example, when one testicle has been removed from a young rabbit, and the vas deferens of the opposite side ligated, the seminal portion of the remaining testicle degenerates, but the interstitial portion undergoes a compensatory hypertrophy that lasts indefinitely, and the animal's masculinity is not affected in any way save that it is barren.

THE "NATURAL EUNUCH."

While the same authors maintain that infecundity is the sole result of degeneration of the seminal gland, copulative power and the sexual appetite being preserved and often even augmented, they draw an entirely different picture of the results of insufficiency of the interstitial gland—results that, if the defect occurs early enough in the life of the individual, make the person a "natural eunuch" (*castrat naturel*). To produce this result, the insufficiency must be total, constituting adiaSTEMATIA, and it must exist before puberty.

The "natural eunuch," like the castrated man, is readily distinguished. He has no pubic hair and no beard; his skin is pale and delicate; his face becomes wrinkled at an early age; his penis remains small and is incapable of erection; his genital tract and its annexial glands retain their infantile characters; his breasts are often unnaturally developed; his stature is great, the lower limbs being proportionately longer than they ought to be; the skeleton is slender, but the pelvis broad, the iliac bones turned prominently outward. He presents, in addition, a tendency to obesity, he has absolutely no sexual desire, his voice is of a characteristic timbre, he is disposed to be indolent, and frequently his understanding is feeble.

If the interstitial insufficiency is only partial, the manifestations will vary according to its degree and according to the age at which it occurs. Many of the cases are described under the terms infantilism, gigantism, and femininity. Between the subjects of these abnormalities and normal individuals there is a wide range of persons affected with interstitial insufficiency. This form of testicular inadequacy may be temporary; at least the authors have been able to delay the occurrence of puberty in rabbits by tying the vasa deferentia, but it took place eventually. We may

remark that it is not easy to see why this operation should in itself exert a repressive action on the development of the interstitial elements of the testicle, and the eventual resumption and perfection of that development seem to lend color to the supposition that the interference which followed ligation of the vasa deferentia was due to some collateral action, perhaps of a reflex nature, rather than to mere occlusion of the ducts. But, however that may be, Ancel and Bouin's investigations possess the interest that attaches to all physiological studies of an original character, even if they appear to have no immediate bearing upon the possibilities of medicine. The transitory form of testicular insufficiency of the interstitial type seems to occur occasionally in the human subject, and among its manifestations our authors mention great muscular weakness, accommodative asthenopia, nervous exhaustion, rapidity of growth, and a disposition to tuberculous disease.

ANTISTREPTOCOCCUS SERUM IN PUERPERAL SEPTICÆMIA.

With the discovery of diphtheria antitoxine and its successful use in the treatment of diphtheria, the cause of serum therapy received a marked impetus. Indeed, many hopes, roused by the success of the serum, were disappointed, for it was soon found that not all the pathogenic microorganisms produced a soluble toxine which caused the symptoms of the disease and could be combated by a soluble antitoxine. Furthermore, some pathogenic organisms, like the streptococcus, which were believed to produce soluble toxines appeared to be entirely unaffected by the injection of an antitoxine produced after the manner of the diphtheria antitoxine. Bacteriologists explained the failure of antistreptococcus serum to inhibit the growth of streptococci in the tissues by assuming that the streptococci, while morphologically identical, were culturally and pathogenically dissimilar. But in severe infections due to the streptococcus it is not improper to employ injections of antistreptococcus serum, particularly if the infection is shown by bacteriological methods to be due to that organism.

T. Garnet Leary (*Intercolonial Medical Journal of Australasia*, November 20, 1905) reports five cases of puerperal septicæmia which were successfully treated with antistreptococcus serum. One of the patients became infected during the emptying of the uterus for hæmorrhage in the sixth month of pregnancy. Two injections of ten cubic centimetres each of antistreptococcus serum were given. The second patient was infected during version for hæmorrhage from placenta prævia and the subsequent removal of the adherent membranes. Four injections of ten

cubic centimetres each were administered. The third patient was infected during a forceps delivery with rupture of the perinæum. Two injections of ten cubic centimetres each and one of twenty cubic centimetres of antistreptococcus serum were administered. The fourth patient was infected through a perineal tear sustained during forceps delivery. Four injections of ten cubic centimetres each of antistreptococcus serum were given. The fifth patient was infected after post partum hæmorrhage. Four injections of ten cubic centimetres each of antistreptococcus serum were administered. In the care of cases of puerperal septicæmia the author advises the employment of antistreptococcus serum early and a repetition of the usual dose of ten cubic centimetres two or three times in the first twenty-four hours. If possible, a bacteriological examination should be made. Curetting should be done early, if at all, and douching should be employed with discretion, as in certain types of infection vigorous local treatment is harmful.

THE DIAGNOSIS OF INTRATHORACIC ANEURYSM.

The diagnosis of aneurysm of the aorta and of the intrathoracic portions of the branches of the arch of the aorta is not always easy. There are several intrathoracic conditions which present a symptomatology similar to that of aneurysm, which the methods of physical diagnosis fail to distinguish properly. Again, every pathologist has discovered aneurysms of the arch of the aorta at autopsy which were not known to exist or which were not even suspected during life. Since the advent of the Röntgen rays into the field of diagnostics, apparent aneurysms have been discovered during life which have failed to be confirmed on the post mortem table. Baetjer (*Johns Hopkins Hospital Bulletin*, January) believes that the ray examination of the thorax can enable us to make an absolute diagnosis, either positive or negative, as regards aneurysm of the aorta. Of the two methods, radiographic and radiosopic, the former gives a permanent record; but the latter gives a more comprehensive knowledge of the chest. The details of the examination as conducted by Baetjer are as follows: The patient is first examined to see that no anatomical abnormalities of the thorax or of the vertebral column are present. He is then placed in the sitting posture with his back to the tube, which should be from twenty to twenty-four inches away from his body and on a level with his third rib, and the examination made with the fluoroscope from the front. Then a second examination is made with the positions of the observer and of the tube reversed, and still a third observation is made from the side. Further study may be made with the tube on a level with the end of the sternum.

Any shadow existing to the right or to the left of the sternum is abnormal, except in very thin individuals, in whom, in about one per cent. of cases, a slight pulsation can be seen normally. Such abnormal shadows may be due to the presence of a new growth, of enlarged lymph nodes, of a displaced aorta, of a dilated aorta, or of an aneurysm of the aorta. In new growths and glandular enlargements the shadow is darker and its edges are more hazy and irregular than those of an aneurysm. In dilatation of the aorta the shadow disappears between the pulsations. In cases of large pulsating aneurysms the diagnosis is not difficult. In small aneurysms the diagnosis is difficult, and it is in just such cases that an early diagnosis is of most value to the patient. The one point to bear in mind is that a pulsating shadow which does not disappear between pulsations should always be viewed with grave suspicion. In the past four years a positive diagnosis of aneurysm has been made in 104 cases. The interpretation of the fluoroscopic picture very probably varies with the operator; so that it is necessary that the clinician submit his patient to a radiologist of experience and one who is accurate in his method of procedure if he wishes to rely upon the ray diagnosis.

THE CAUSES OF CHOREA.

Although chorea is a morbid manifestation which clinically is easily recognized, it is of most diverse ætiology. We may divide the cases into five groups, omitting from consideration Huntington's chorea, chorea occurring as a symptom of gross lesions, and local and habit choreas.

The first group includes those depending upon moral causes and intellectual strain (or surmenage). Of the exciting causes of chorea, says Ross, the most frequent and important are emotional disturbances, such as fright, sorrow, and discontent. Hysterical girls and those who are strongly predisposed to chorea or who have already suffered from an attack may acquire the disease from imitation of others suffering from it. Injury and shock precede a certain number of cases. Premature excitement of the sexual passions and menstrual irregularity have been included among the exciting causes. It is very common among young persons, especially girls approaching puberty, and therefore at a very emotional period of life.

The second group is made up of cases due to reflex irritation. Eye strain in some patients causes chorea, and in them the use of a cycloplegic at once mitigates the symptoms, as shown by Hansell. Appropriate spectacles complete the cure. Although Osler failed to find any causal relationship between chorea and intestinal worms,

there are a number of cases on record where the symptoms ceased immediately after the expulsion of a tapeworm or of a mass of lumbricoids. Disorders of digestion or of the uterus are frequently the cause, and the chorea of pregnancy is acknowledged to be a serious affair. In a large number of cases, in fact, the malady is called into existence by irritation of peripheral portions of the nervous system. An abscess caused by a broken tooth has given rise to a chorea which lasted for two years; C. Fischer removed the offending roots, "when the movements ceased at once." A chorea of six months' standing was cured by Borelli by removing a small neuroma from a boy's foot. Arthritis, pericarditis, endocarditis (less frequently rheumatic than is generally supposed), and other inflammations, such as pleurisy, bronchitis, and pneumonia, are often associated with chorea. Dr. H. C. Wood thinks it possible that the choreic movements in some of these cases are reflex.

In the third group chorea accompanies some abnormality of the blood. Thus, anæmia, chlorosis, toxinæmia, and the poisons of several acute infectious diseases are generally admitted as causes. Some of the apparently hysterical cases may belong to this category. Mineral poisons (carbon dioxide, iodoform, etc.) are exceptionally also productive of this disease. The fourth group consists of cases in which lesions of the brain or spinal cord exist. These are of such diverse character and irregular occurrence (many of them being in all probability the results of the disease) that in chorea there cannot be said to be really any definitely ascertained morbid anatomy. In fatal cases capillary embolism of the optic thalami and corpora striata are frequent, although not constant as stated by Broadbent. Other lesions include cortical hyperæmia, lesions in the Rolandic area, multiple hæmorrhages, abscess in the brain, and leucocyte infiltration and alterations in the gray horns of the spinal cord. But no constancy in these lesions is demonstrable (Tyson). The fifth group includes cases apparently due to microbic infection, whether a bacillus or a diplococcus has not yet been determined. Good authorities appear to incline to the view that some cases of chorea, at least, belong to this group.

THE TREATMENT OF CHOREA.

The treatment of Sydenham's chorea, or *folie musculaire*, as it was aptly styled by Bouillaud, must be rational, or causal, as well as symptomatic. Moral treatment, as well as hygienic, finds a prominent place in the therapeutics. Reflex causes of irritation must be removed or al-

layed. Where a rheumatic or septic element is recognized, the salicylates find a place; in chlorosis tincture of iron or syrup of ferrous iodide is effective; in some morbid conditions of the blood arsenic or quinine is of service. Conium in large doses has proved a useful sedative, and also the fluid extract of *cimicifuga racemosa*. In addition to the treatment with drugs, or in some cases as a substitute for it, hydrotherapy is very serviceable, especially in the form of the prolonged warm bath or the wet pack. In addition to absolute rest in bed, a strict milk diet, and hydrotherapy, Langevin (*Journal de médecine de Paris*, January 1st) recommends gradually increasing doses of antipyrine. In forty cases this method cured the patients in from twenty to twenty-five days on the average. The administration of antipyrine should be carefully watched, and its use should be suspended in the event of albuminuria, marked weakness of the pulse, or other toxic manifestation. The bromides have been tried, but they have been found to be too depressing and to have but little influence on the course of the disease.

Critical Reviews.

THE RELATIVE INDICATIONS FOR CÆSAREAN SECTION.

By STANLEY P. WARREN, M. D.,
PORTLAND, MAINE.

During the past year obstetricians have seemed to favor an extension of the relative indications for Cæsarean section. It appears to the author that the present status of abdominal surgery, so far as its mortality rate is concerned, is an important factor in electing the method of delivery in obstructed pelves. In making that election, due weight must be given to the following considerations:

The Maximum Pelvic Diameter Authorizing Cæsarean Section.—Each case must be decided upon its own merits, and it does not seem essential that an absolute standard of measurement for the relative indications should be established. The scale of disability must be a movable one. The birth canal of a given woman is competent for a child of small size, but it might not be competent for one of unusual size. For instance, pelvimetry shows that a certain pelvis has a true conjugate of four inches, and the child is estimated to weigh seven pounds. Here there would be no question of section, but a reasonable hope of extracting a living child by the forceps or version. But suppose the child should weigh ten or more pounds; now the chances would be strong against extracting alive such a massive child through a canal with a narrowing of even only half an inch. Suppose that a primipara has been delivered of a still-born child by a difficult forceps extraction, and that it is morally certain that its death was due to the operation. In considering the probabilities of her being delivered of subsequent living children the following facts must be admitted: that successive children of the same sex in-

crease in head diameters and in weight, that the working power of the uterus weakens with each subsequent labor, and that pelvic narrowing definitely increases as tumors grow and the synchondroses ankylose. Against these disadvantages must be balanced the results of recent elective section. Under the present perfection of abdominal surgery the chances of the major operation, Cæsarean section, are less hypothetical than those of the minor operation, forceps or version. The importance of an obstructed birth canal, upon the accuracy of whose measurement depends the choice of the method of delivery, is negated by rejection of that route for the safer one of abdominal section.

The Prognosis of the Operation.—In studying the problem of delivery in obstructed pelvis the main question to be answered is, What method of birth, all things considered, will probably result best for the child? Under any or all of the recognized methods the mother's life is not immediately hazarded; on the contrary, all methods but one are distinctly hazardous to the child. To save the child, Cæsarean section must have first place. In elective section its life is practically assured; in compulsory section its life depends, not upon the section, but upon the character of the previous attempts at delivery. In every case careful pelvimetry and estimate of the probable size of the child should precede the question as to the particular form of delivery; in neither of these two details is the judgment of the ordinary practitioner reliable, because of his lack of practice in these modes of diagnosis. The proposition is not whether the expert consultant can drag a child through a birth canal where disproportion is extreme, but whether under such conditions the general practitioner can extract a live child. It is neither morally nor professionally right to balance the life of the child against the skill of the obstetrician, nor good practice to reject a fairly safe operation for a positively risky one. All experienced obstetricians agree that a difficult high forceps extraction or late podalic version is certainly more dangerous to the mother than a laparotomy, and much more so to the child, even when labor is conducted under the most approved technics by the expert.

The Method of Operation.—In cases of disproportion between the canal and the child, the methods of delivery are by induction of premature labor, by forceps or podalic version, by Cæsarean section, by symphysiotomy, and by embryotomy. While theoretically the chances for foetal life are better early in the eighth month than at term (because a smaller child can more easily pass through obstructions which would be impossible when it became fully developed at term), in practice the method is unreliable. The single advantage of lessened size in prematurity is counterbalanced by the greater advantage of normal foetal resistance at term to the risks of extraction. For illustration, an easy forceps extraction at the thirty-second week is likely to be more dangerous to the child than a more difficult one at term. Foetal chances in induced labor after viability are estimated at from sixty to eighty per cent.; the nearer to term the better the chances. Edgar well says: "There is no criterion by which the obstetrician may foretell the outcome of a case. In something like six per cent. of cases of labor in

contracted pelvis, irrespective of the pelvic measurements, labor could not be completed without resort to Cæsarean section, symphysiotomy, or embryotomy."

The indications for symphysiotomy are a conjugate measuring from 2.6 to 3.4 inches, slightly larger than for Cæsarean section; the foetal mortality is from twelve to fourteen per cent. It is peculiarly a hospital operation and comparatively easy to perform, but maternal convalescence is likely to be complicated and long. The tide of American opinion is setting steadily against its use, and it ranks with us after forceps, version, induced labor, and Cæsarean section.

For the general practitioner delivery in contracted pelvis by forceps or podalic version is a major operation, and distinctly hazardous to both mother and child. The risk to the mother is from infection, traumatism, or shock and hæmorrhage; to the child the immediate risks are asphyxia and forceps compression, and the sequelæ are paralysis of important nerve trunks, permanent injury to the brain, and early death from general impairment. Few general obstetricians have learned the advantages of the axis traction forceps in complicated labor, relying more upon brute force and less upon personal dexterity in using the common models of the instrument. The aid of the expert is not always at hand when required. Late podalic version in these cases is always difficult and is likely to produce serious maternal shock or even uterine rupture. Moreover, it is nearly always fatal to the child. Its vitality is already weakened by the asphyxia due to the forceps and intrauterine compression, and in this feeble condition it succumbs to the extra manipulation required to extract the after coming head. Long experience has convinced the author that either a high forceps delivery or late podalic version is one of the most dangerous operations of obstetric surgery. Embryotomy assures the death of the child; it is always compulsory instead of elective, and a difficult operation, with corresponding risk to the mother from infection and trauma.

Cæsarean section is the child's operation. In elective cases it will almost certainly be extracted quickly and uninjured; in compulsory cases its chances are much better than after a forceps operation or version. The maternal prognosis rests almost entirely upon the character of the previous attempts at delivery. The chief peril is infection, hence the less interference with the birth canal the greater probability of a normal puerperium. The actual operation is an easy one, within the capability of any physician who has had the usual hospital experience as an interne, and the general practitioner within touch of a competent abdominal surgeon can commonly delay labor until the latter can reach him. In extending the relative indications for Cæsarean section the check to an unwarranted operation would be the decision of the expert consultant. But for old primiparæ with a rigid or cicatricial vagina, or for those who have undoubted obstruction of the bony canal, and for multiparæ who have repeatedly lost children on account of their great size, section should be encouraged. Each woman can be assured that the operation is practically safe, and that it requires little longer time than the ordinary lying-in.

News Items.

NEW YORK CITY AND STATE.

Changes of Address.—Dr. T. Joseph O'Connell, from Corning to 72 Clinton Avenue, South, Rochester.

The Harvey Society.—The seventh lecture of the Harvey course is announced for Saturday, February 3rd, at the Academy of Medicine. Professor Frederick S. Lee, of Columbia University, is to lecture on the subject of Fatigue.

The New York, Ontario and Western Railroad.—After twenty years of continuous service with the company, Dr. James G. Hunt, of Utica, has been reappointed surgeon for the road.

A Reception in Honor of Baron Takaki, surgeon general (retired) of the Japanese Navy, was given by Dr. Louis Livingston Seaman, of New York, on Sunday afternoon, January 28th.

Jamestown, N. Y., Personals.—Dr. Ray Sackrider, recently associated with Dr. A. A. Hubbell, of Buffalo, has opened an office at Jamestown. Dr. J. L. Hutchinson has removed from Jamestown to Denver, Col.

The Geneva (N. Y.) Medical Society, with the president, Dr. Charles D. McCarthy, acting as toastmaster, enjoyed and did ample justice to its annual banquet, held on Thursday, January 18th.

The American Urological Association.—At the next meeting, on Wednesday evening, February 7th, Dr. William N. Wishard, of Indianapolis, will read a paper entitled *The Operative Treatment of Prostatic Hypertrophy*.

Bequest to the Brooklyn German Hospital.—Under the provisions of the will of Mary Rosenbaum, and in accordance with the ruling of a justice of the Supreme Court, the hospital will receive \$25,000.

The Department of Health of the Borough of Brooklyn.—Dr. Thomas R. Maxfield, of Brooklyn, has been appointed acting assistant sanitary superintendent, to fill the vacancy caused by the removal, by the board, of his predecessor.

The Milk Commission of the Medical Society of the County of New York announces that, while it has supervision of only that portion of a dealer's milk which carries its certification, it does not intend to allow a dealer known to have adulterated milk to sell certified milk.

Syracuse Academy of Medicine.—At a meeting of the Syracuse Academy of Medicine held last week papers were read by Dr. I. H. Levy and Dr. E. W. Belknap. Dr. Levy's paper was on *Food Stagnation*, and that of Dr. Belknap was on *An Unusual Obstetrical Case*.

To Aid Seney Hospital.—The Florence Nightingale Association of St. John's Methodist Episcopal Church, Bedford avenue and Wilson street, will give an interesting entertainment in the Sunday school hall next Tuesday evening for the benefit of Seney Hospital.

The Fulton (N. Y.) Physicians' and Surgeons' Association.—The annual meeting was held on Thursday, January 18th, and the following officers were elected: President, Dr. S. A. Russell; vice-president, Dr. Harriet M. Doane; secretary and treasurer, Dr. Charles J. Bacon; censors, Dr. E. J. Cusack, Dr. W. M. Wells, Dr. Homer P. Marsh; trustees, Dr. L. Fowler Joy, Dr. N. H. Haviland, Dr. F. E. Fox.

Associated Physicians of Long Island in Annual Meeting.—The eighth annual meeting of the Associated Physicians of Long Island was held last week in the Medical Society's Building, 1313 Bedford avenue, Brooklyn. Dr. H. A. Kelly, of Baltimore, read a paper. Dr. E. H. Bartley was elected president; Drs. J. E. Hutcheson, H. B. Delatour, and A. H. Terry, vice-presidents; Dr. J. C. Hancock, secretary, and Dr. C. B. Bacon, treasurer.

A Gift to Stony Wold Sanatorium at Kushaqua, N. Y.—It is announced that Mr. J. Pierpont Morgan has promised \$10,000 to this sanatorium, for the treatment of patients with tuberculosis, on condition that \$23,000 more, to liquidate an indebtedness, be raised. Only about \$5,000 remains to be raised to validate Mr. Morgan's offer. The sanatorium is under the direction of an association of which Mrs. James E. Newcomb is president.

The Oneonta (N. Y.) County Medical Society.—At a meeting held in Oneonta, on Saturday, January 27th, a

constitution and by laws were adopted subject to approval by the State society. It was decided that the annual meeting shall be held in Oneonta on the second Tuesday of December, and the semi annual meeting at Cooperstown, or such other place as should be decided upon in the annual meeting, on the second Tuesday of June.

The Watervliet (N. Y.) Medical Society.—A number of physicians of Watervliet have organized a society to be known as the Watervliet Medical Society. The following officers have been chosen: President, Dr. Lansing Van Auken; vice-president, Dr. Robert J. O'Brien; secretary and treasurer, Dr. Archie I. Cullen. The society will direct its efforts to secure the proposed new hospital for Watervliet. Matters will be discussed at a meeting to be held the first Thursday in February.

The Medical Society of the County of Niagara, N. Y., and the Niagara Medical Association, held a joint meeting at Lockport, on Thursday, January 18th, and effected an amalgamation of the two bodies under the by laws of the New York State Medical Society. The following officers were elected: President, Dr. A. N. Moore, Lockport; vice-president, Dr. Frank Guillemont, Niagara Falls; secretary, Dr. F. A. Crosby, Lockport; treasurer, Dr. W. A. Scott, Niagara Falls.

Personal.—Dr. George Ryerson Fowler, of Brooklyn, was taken sick on the train to Albany, whither he was going to attend the meeting of the Medical Society of the State of New York, and was found to be suffering from appendicular disease. He was taken to the Albany Hospital and on Monday Dr. Willis G. Macdonald operated upon him. As we go to press Dr. Fowler's condition is reported to be favorable. It is said that, although the appendix was found to be in a gangrenous condition, there was no pus, and the prognosis is regarded as favorable.

Brooklyn Neurological Society.—At the regular meeting of this society held last week Thursday, Dr. Cecil MacCoy presiding, Dr. Tilney read the clinical history of a patient with family periodic paralysis. Dr. Smith Ely Jelliffe, of New York, contributed a paper on *Neurological Fragments*, in which he discussed two unique cases of epilepsy; one suddenly recovering presumably after the rupture of an intracranial cyst; another beginning suddenly and following a dose of two, one half grain tablets of santonin. He also gave a résumé of some recent work on tests for sensation, dealing particularly with Head's recent work on protopathic and epicritic sensibility.

The Eastern Medical Society.—The next meeting of the society will be held on Friday, February 9th. There will be a symposium on obstetrical and gynecological subjects of interest to the general practitioner. The following papers will be presented: *Forceps, Version, and Craniotomy*, by Dr. George L. Brodhead; *A Consideration of the Treatment of Displacements of the Uterus*, by Dr. Hiram N. Vineberg; *The Proper Indications for Curettage*, by Dr. B. H. Wells; *The Present Status of the Toxæmias of Pregnancy*, by Dr. J. Clifton Edgar. Discussion by Dr. Henry C. Coe, Dr. J. Riddle Goffe, Dr. L. J. Ladinski, Dr. Herman Boldt, Dr. J. Barsky, Dr. B. Gordon, and others.

Syracuse to Have New Smallpox Hospital.—A building to be used as an emergency hospital for the care of smallpox patients will be erected this year at the grounds upon which the present city hospital is located. The sum of \$4,000 is contained in the city tax budget for a new building to be used for the care of patients suffering from contagious disease and the desire is to make use of it without unnecessary delay. The erection of such a building has been recommended several times in the annual reports of the health officer. The character of the building, it was said, would rest entirely with the judgment of Health Officer Dr. D. M. Totman. He will in the near future consider plans with a view to determining upon the most useful building that can be provided with the fund available.

A Proposed Convalescent Colony for New York.—At the request of Mayor McClellan, Senator Saxe, of Manhattan, introduced a bill in the State Senate, providing for a convalescent colony at the sea shore in New York City or in any adjacent county. The commissioner of health, president of Bellevue Hospital, and the commissioner of public charities, are made a board of supervision for the colony. The board is authorized to purchase land, erect buildings, lay out parks and playgrounds, and bathing pavilions. The board of estimate is authorized to appropriate by a majority

vote \$2,500,000. If the colony be located in a county adjacent to New York City the board is authorized to receive for purposes of health or recreation any residents of said county upon the agreement of the authorities of said county to pay the expense and maintenance. No insane persons are to be received or maintained. The colony is for the reception and maintenance of outside sick and convalescent patients of hospitals and of such other persons as may be received for the purposes of health and recreation.

A Department of Liberal Arts and Sciences Proposed for the University of Buffalo.—The movement to establish an arts college in connection with the professional schools now constituting the University of Buffalo received a substantial impetus on Friday evening, January 19th, at a meeting of physicians in the University Club's home at Delaware Avenue and Allen Street, Buffalo. There were about 200 present. Several speakers favored the idea and some offered to subscribe. At the end of the meeting it was said that about \$20,000 had been formally subscribed, and that more was indicated. Dr. Ernest Wende said that a well known physician, now out of the city, had authorized him to subscribe \$5,000 for him. It appeared that though some of the physicians did not subscribe most of those there were heartily in favor of the establishment of the arts department. The vice chancellor of the university read a subscription blank to show that all subscriptions were conditioned on the raising of \$500,000 by January 1, 1908. He stated that the council of the university was to hold the stock for the benefit of the university. Among the physicians' organizations that united for the meeting were the Erie County Medical Association, the Physicians' League, and the Medical Union. Dr. Wende called the meeting to order about 9 o'clock and Dr. Henry R. Hopkins was chosen as chairman. Dr. Franklin W. Barrows was chosen as secretary.

The Medical Society of the State of New York.—At the one hundredth annual meeting, held this week, the consolidation of the New York State Medical Association with the society was consummated. Officers for the ensuing year were elected, as follows: President, Dr. Joseph D. Bryant, of New York; vice-presidents, Dr. Herman R. Ainsworth, of Addison; Dr. Frederic C. Curtis, of Albany, and Dr. Allan A. Jones, of Buffalo; secretary, Dr. Wisner R. Townsend, of New York; treasurer, Dr. Alexander Lambert, of New York; committee of arrangements, Dr. William J. Nellis, of Albany; Dr. Arthur G. Root, of Albany; Dr. Henry L. K. Shaw, of Albany; Dr. Hermon C. Gordinier, of Troy; Dr. William C. Krauss, of Buffalo; Dr. Edgar A. Vander Veer, of Albany, and Dr. Wendell C. Phillips, of New York; committee on scientific work, Dr. Leo H. Neuman, of Albany; Dr. Algernon T. Bristow, of Brooklyn, and Dr. Herbert D. Williams, of Buffalo; committee on legislation, Dr. Arthur G. Root, of Albany; Dr. Ernest Wendt, of Buffalo, and Dr. Egbert Le Fevre, of New York; committee on public health, Dr. John L. Hefron, of Syracuse; Dr. Hamilton D. Wey, of Elmira, and Dr. Henry R. Hopkins, of Buffalo. Dr. Willis G. MacDonald, of Albany, and Dr. Edward D. Fisher, of New York, were elected to fill vacancies in the House of Delegates. Presidents of district branches were elected as follows: First, Dr. V. P. Gibney, of New York; second, Dr. H. B. Delatour, of Brooklyn; third, Dr. T. J. Wheeler, of Chatham; fourth, Dr. G. C. Medill, of Ogdensburg; fifth, Dr. Nathan Jacobson, of Syracuse; sixth, Dr. R. G. Loop, of Elmira; seventh, Dr. J. F. Whitbeck, of Rochester; eighth, Dr. De Lancey Rochester, of Buffalo. Dr. J. W. Grosvenor, of Buffalo; Dr. Eliot Harris, of New York; Dr. A. Jacobi, of New York; Dr. Wisner R. Townsend, of New York, and Dr. Albert Vander Veer, of Albany, were elected delegates to the American Medical Association.

The New York Academy of Medicine.—A meeting of the academy, under the auspices of the *Section in Otolaryngology*, was held on Thursday, February 1st, with the following programme: Paper, Intracranial Lesions of Otitic Origin, by Dr. M. Allen Starr; paper, Otitic Disease in Relation to Intracranial Lesions, by Dr. Clarence John Blake, of Boston; discussion by Dr. Bernard Sachs, Dr. Gorham Bacon, Dr. George W. Jacoby, Dr. H. Knapp, Dr. Edward B. Dench, Dr. J. B. Clemens, Dr. J. F. McKernon, Dr. T. P. Berens, and others. The *Section in Surgery* held a meeting on Friday, February 2nd. The following programme was announced for the occasion: Presentation of Patients; (a) Thyroidectomy for Exophthalmic Goitre, two cases, by

Dr. Wm. A. Downes; (b) Patient Cured by Implantation of Silver Wire for Large Abdominal Aperture—Well five years after operation, by Dr. Willy Meyer; (c) Cases Illustrating Result of Implantation of Silver Wire Filagree, or Silver Wire, for Defects of Abdominal Wall—Several years after operation, by Dr. Willy Meyer; (d) Result of Plastic Operation for Carcinoma of Cheek, by Dr. Franz Torek; (e) Report of a Case of Appendicostomy, by Dr. Samuel G. Gant; (f) Excision of Rectum, Sigmoid, and Transverse Colon, with Closure of Two Artificial Ani, by Dr. Samuel G. Gant; (g) Stricture of Oesophagus, showing a good result three years after operation, by Dr. Charles R. L. Putnam; (h) Case reports of marked mental and physical improvement following Nephropexy in Insane Patients. Two cases by Dr. Warren S. Bickham; paper, Wheel Injuries, Especially Those Due to Automobiles and Other Rubber Tired Vehicles, by Dr. Edward M. Foote; The Use of Silver Wire in Repair of the Abdominal Wall, by Dr. Joseph Wiener, Jr. Presentation of Specimens. Exhibition of New Instruments and Apparatus: Silver Wire Cable Suture Material, by Dr. Howard Lilienthal. The *Section in Pediatrics* will hold a meeting on Thursday, February 8th, with the following order: Paper, The Dosage of Diphtheria Antitoxine from an Experimental Standpoint, by Dr. William H. Park; paper, The Dosage of Diphtheria Antitoxine as Administered in the Hospitals of the Department of Health, by Dr. Wm. E. Studdiford; paper, The Dosage of Diphtheria Antitoxine in Private Practice, by Dr. C. G. Kerley; discussion by Dr. Holt, Dr. Northrup, and Dr. B. Franklin Royer, of the Municipal Hospital, Philadelphia.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending January 27, 1906:

	January 27.		January 20.	
	Cases.	Deaths.	Cases.	Deaths.
Measles.....	1,368	34	1,487	17
Diphtheria and croup.....	318	11	359	46
Scarlet fever.....	226	16	237	10
Smallpox.....	215	—	205	—
Epidemic typhus.....	44	178	448	159
Typhoid fever.....	29	—	35	5
Cerebrospinal meningitis.....	23	16	28	15
	2,713	290	2,799	252

Society Meetings for the Coming Week:

MONDAY, February 5th.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

TUESDAY, February 6th.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, February 7th.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; New York Genitourinary Society; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, February 8th.—New York Academy of Medicine (Sections in Pediatrics and Otolaryngology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, February 9th.—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-

urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

Saturday, February 10th—Obstetrical Society of Boston (private).

PHILADELPHIA AND THE MIDDLE STATES

Change of Address. Dr. G. Vico Ciccone, to 911 South Seventh Street, Philadelphia.

The Salem (N. J.) County Medical Society.—A meeting of the society will be held at the Schneller House, Salem, N. J., Wednesday, February 8th, 1906. The subject, Greenwich, is to read a paper on Symphysiotomy.

Philadelphia Personal.—Dr. M. J. Greenman, director of the Wistar Institute of Anatomy, gave a reception on Saturday evening, January 20th, in honor of Dr. Henry H. Donaldson, who has recently come to Philadelphia to take charge of the laboratory of bacteriology which are being made on a large scale at the Wistar Institute.

Scientific Society Meetings in Philadelphia for the Week Ending February 10, 1906. Monday, February 5th, Philadelphia Academy of Surgery, B. Coe and M. Rossopoli Section, Academy of Natural Sciences; West Philadelphia Medical Association; Northwestern Medical Society. Tuesday, February 6th, Academy of Natural Sciences; Philadelphia Medical Examiners' Association. Wednesday, February 7th, College of Physicians; Association of Clinical Assistants, Wills Hospital. Thursday, February 8th, Pathological Society; Section Meeting, Franklin Institute. Friday, February 9th, Northern Medical Association.

Many Cases of Infectious Disease in Philadelphia caused the Board of Education to close the following schools temporarily to allow of disinfection: Saunderson school, Orianna and Callowhill Streets, for measles; Jefferson school, Fifth Street above Poplar, measles; Webster school, Eleventh Street below Thompson, scarlet fever and measles; Allison school, Fifteenth and Norris Streets, scarlet fever; Cambria school, Thirtieth and Cambria Streets, diphtheria. In the last ten days eighteen schools have been disinfected on account of the occurrence of transmissible diseases.

Relief for Insane in Philadelphia.—At a meeting of the Philadelphia County Medical Society on Wednesday evening resolutions were adopted approving the action recently taken by Mayor Weaver, Dr. Coplin, Director of Public Health, and the city councils for the immediate relief of the distressing conditions of the insane department in the Philadelphia General Hospital. It was suggested that the general hospital be separated from the department for the insane. The society further advocated the removal of the insane department to an institution situated in the suburbs, with ample grounds, retaining the present site for emergency cases.

Philadelphia County Medical Society.—At the meeting of the Philadelphia County Medical Society, held January 24th, Dr. John B. Chapin read a paper on the Public Care of the Insane, and Dr. Frederick Peterson, of New York, read a paper on the State Care of the Insane in New York. Dr. W. M. L. Coplin, Dr. F. X. Dercum, Dr. W. G. Spiller, Dr. C. W. Burr, Dr. William Pickett, and Dr. Charles K. Mills took part in the discussion. At the conclusion of the discussion resolutions were adopted recommending the removal of the insane department of the Philadelphia Hospital to the outskirts of the city and the establishment of a psychopathic department in connection with the present hospital for the treatment of cases of the acute type.

The Tuberculosis Exhibit was opened in Philadelphia at Eighth and Chestnut Streets on January 22nd. On the evening of January 24th Dr. Leonard Pearson delivered a lecture on the State Control of Tuberculosis, in which he advocated State sanatoria for the treatment of the disease. The great need for sanatoria in Pennsylvania is apparent to every practising physician who has tuberculous patients who are either too poor to pay for admission to the very excellent private institutions already established or too far advanced in the disease to be accepted as patients. The great argument against the establishment of State sanatoria is the faint of practical politics that would accompany the inauguration of the system. The best way out of the difficulty is probably to extend State aid to institutions already established so that all patients applying may be admitted.

The Health of Philadelphia.—During the three weeks ending July 20, 1906, the following cases of transmissible diseases were reported to the Bureau of Health:

	Week ending July 13, 1906	Week ending July 20, 1906	Week ending July 27, 1906	Week ending July 24, 1906	Week ending July 31, 1906
Pneumonia	151	68	182	81	173
Erysipelas	17	2	13	2	12
Tetanus	0	0	0	3	1
Septicemia	0	0	0	0	0
Anthrax	33	30	22	28	26
Cancer	0	0	0	0	0
Hydrophobia	0	0	0	0	0
Diarrhea and enteritis	0	0	0	0	0

The mortality of Philadelphia for the week ending January 20th was 243, as against 256 the corresponding week last year, showing a decrease of 13 deaths, and making the death rate for last week 21.29. The number of cases and deaths from infectious diseases was as follows: Diphtheria, 36 cases, 3 deaths; scarlatina, 34 cases, 1 death; typhoid fever, 11 cases, 3 deaths; measles, 164 cases, 4 deaths; tuberculosis, 40 cases, 30 deaths; smallpox, no cases, no deaths. The deaths from pneumonia were 37, whooping cough 2, heart disease 27, bronchitis 8, marasmus 4. There were 10 deaths from violent causes. The number of children who died in the year of 1905 was 2, under five years of age 15, of five to ten years 10, of ten to fifteen years 10, in public institutions 73.

BOSTON AND NEW ENGLAND

The New Haven (Conn.) Medical Association.—At the annual meeting, held on Wednesday, January 17th, the following officers were elected: President, Dr. Leonard W. Bacon, Jr.; first vice-president, Dr. Henry W. Ring; second vice-president, Dr. E. M. McCabe; secretary, Dr. W. E. Hartshorn; treasurer, Dr. Robert E. Peck; executive committee, Dr. Jay W. Satter and Dr. Stephen J. Mader; finance committee, Dr. F. H. Wheeler and Dr. A. N. Alving; library committee, Dr. W. S. Barnes, Jr., and Dr. H. N. Steele; literary committee, Dr. Edward S. Moulton.

Norwich (Conn.) Personal.—Dr. Leonard P. Almy, visiting surgeon and gynecologist to the William W. Backus Hospital, at Norwich, has been obliged to submit to an amputation at the lower third of the right thigh, in consequence of gangrene which started in the great toe, from ingrowing toe nail. The operation was performed on January 13th, at the hospital of the Private Hospital Association on West Thirty-third Street, New York, by Dr. Frederick S. Dennis. At last accounts Dr. Almy was having a satisfactory convalescence. During the Spanish-American war Dr. Almy was chief surgeon of volunteers and had charge of a division of the United States General Hospital at camp Wyckoff, Montauk Point, Long Island.

The Mortality of Boston.—The number of deaths reported to the board of health for the week ending January 20th was 243, as against 256 the corresponding week last year, showing a decrease of 13 deaths, and making the death rate for last week 21.29. The number of cases and deaths from infectious diseases was as follows: Diphtheria, 36 cases, 3 deaths; scarlatina, 34 cases, 1 death; typhoid fever, 11 cases, 3 deaths; measles, 164 cases, 4 deaths; tuberculosis, 40 cases, 30 deaths; smallpox, no cases, no deaths. The deaths from pneumonia were 37, whooping cough 2, heart disease 27, bronchitis 8, marasmus 4. There were 10 deaths from violent causes. The number of children who died in the year of 1905 was 2, under five years of age 15, of five to ten years 10, of ten to fifteen years 10, in public institutions 73.

Contract Medicine in New Hampshire.—At the annual meeting of the New Hampshire Medical Society, May 18 and 19, 1905, the following resolution was adopted: "On and after the first day of January, 1906, no member of this society shall accept the position of club, society, or organization physician, or agree or continue to do any medical or surgical work for any club, society, or organization at a less rate than the regular or customary charges for like services rendered by other physicians in the same locality, for patients not members of such club, society, or organization, also that in no case shall any physician agree to attend the families of the members of such club, society, or organization

at half price or a less price than the regular rate. Nothing in this section shall be construed as preventing any member from attending the worthy poor at a less rate or to give free services to those who are too poor to pay anything. Any violation of this by law shall be considered unprofessional conduct, and it shall be the duty of the council to expel such members, when proof of such conduct shall be presented to them." In compliance with the foregoing, the executive committee of the Centre District and Merrimack County Medical Society, presents to the society the following resolution: *Whereas*, The New Hampshire State society at its last meeting having expressed itself upon the question of contract medicine, and this society wishing to endorse and support such action, it is therefore, *Resolved*, That no member of the Centre District and Merrimack County Medical Society shall be the medical attendant upon a member of an organization for a fee less than the regular fee of the city or town in which such organization is located. This society shall expel from its membership such a physician and its members shall be prohibited from consulting with a medical contract doctor of any school under penalty of expulsion.

BALTIMORE AND THE SOUTH.

The Bullock (Ala.) County Medical Association held a meeting at Union Springs, on Wednesday, January 17th, and elected officers for the ensuing year as follows: President, Dr. J. L. Bowman; vice-president, Dr. R. H. Hayes; secretary, Dr. C. M. Franklin; treasurer, Dr. T. J. Dean. Dr. Bowman and Dr. F. P. Hixon were added to the board of censors.

The Floyd (Ga.) County Medical Society.—At a meeting appointed for Saturday, January 27th, at Rome, the subject for discussion was to be a Study of Pneumonia, divided as follows: History and Synonyms, by Dr. J. C. Watts; Pathology and Ætiology, by Dr. J. W. Curry; Symptoms, by Dr. C. Hamilton; Treatment, by Dr. J. N. Cheney; general discussion.

New Orleans Health Officials in Costa Rica.—A sanitary commission from New Orleans arrived at Port Limon last Sunday. The commissioners, who were cordially received by the authorities, made a tour of the city of Limon, the sanitary conditions of which they declared to be highly satisfactory.

The McDuffie (Ga.) County Medical Society was organized at Thomson, Ga., on Wednesday, January 17th, under the constitution and by laws of the medical association of Georgia. The following officers were elected: President, Dr. E. S. Harrison, Thomson; vice-president, Dr. Sterling Gibson, Thomson; secretary and treasurer, Dr. B. F. Riley, Jr., Thomson; board of censors, Dr. F. N. Ware and Dr. A. J. Matthews, Thomson, and Dr. Z. D. Story, Winfield; delegate to the legislative council of the Georgia Medical Association, Dr. Z. D. Story.

The Frederick (Md.) County Medical Society.—A meeting was held at Frederick, on Wednesday, January 10th. The following officers who had been elected for the ensuing year was installed: President, Dr. E. L. Beckley; vice-presidents, Dr. Charles F. Goodell and Dr. D. E. Stone, Sr.; treasurer, Dr. William C. Johnson; secretary, Dr. Ira J. McCurdy; librarian, Dr. H. P. Fahrney; board of censors, Dr. William H. Wagner, Dr. J. W. Downey, and C. F. Goodell; delegate, Dr. Franklin B. Smith; committee on public health and legislature, Dr. D. E. Stone, Dr. T. C. Routson, and Dr. J. W. Downey. A symposium on The Sanitary Conditions of Frederick City and County was discussed by a number of the members and the following resolution was passed: That the committee on public health and legislature cause to be drawn a bill for the better protection of the public against contagious and infectious diseases in Frederick city and county; also remedying the weak points in the existing local laws entitled "For Public Health," this bill to be presented to the general assembly now in session after receiving the necessary endorsements. The society also endorsed by resolution the pure food law now pending before Congress.

The Mortality of Baltimore.—The report of the health department for the week ending January 20th, as prepared by the secretary, showed a total of 188 deaths, as compared with 167 the corresponding week of last year, 188 in 1904, and 249 in 1903. The annual death rate in a thousand of population was: Whole, 17.15; white, 14.27; colored, 32.50. Principal causes of death were:

Typhoid fever.....	1	Bronchitis.....	4
Whooping cough.....	6	Pneumonia.....	38
Diphtheria.....	2	Bright's disease.....	11
Influenza.....	1	Congenital debility.....	13
Consumption.....	23	Lack of care.....	6
Cancer.....	5	Old age.....	5
Apoplexy.....	3	Accidents, etc.....	7
Heart diseases.....	24		

The nativity of those who died was: United States, white, 106; foreign, 23; colored, 54; unknown, 5. Eight deaths occurred at Bayview Asylum, 17 in hospitals and 8 in other institutions. Twenty coroners' inquests were held. The following numbers of cases of infectious diseases were reported, as compared with the corresponding week of last year:

	1905.	1906.		1905.	1906.
Smallpox.....	4	4	Measles.....	4	6
Diphtheria.....	25	29	Mumps.....	1	1
Croup.....	2	1	Whooping cough.....	1	24
Scarlet fever.....	34	13	Chickenpox.....	13	10
Typhoid fever.....	10	10	Consumption.....	4	15

CHICAGO AND THE WEST.

The Medical Department of the University of Michigan.—Dr. Roger S. Morris, instructor of internal medicine in the medical department of the University of Michigan, has resigned to accept an appointment in the Johns Hopkins Hospital, Baltimore.

Tuberculosis Quarantine in Peoria.—A tent colony to prevent the spread of tuberculosis is promised for Peoria within a short time. The council will be asked also to appropriate \$600 yearly for the employment of a specially trained nurse for tuberculosis patients.

The Illinois State Board of Health.—At the twenty-ninth annual meeting of the board, held recently at Springfield, Dr. George W. Webster, of Chicago, was elected president and Dr. James A. Egan, of Springfield, was reelected secretary and treasurer.

The Stark (Ohio) County Medical Society.—The following is the list of officers of the society for 1906: President, A. B. Walker, Canton; corresponding secretary, Dr. Frank W. Gavin, Canton; treasurer, Dr. G. F. Zinniger, Canton; executive committee, Dr. J. F. Marchand and Dr. H. P. Pomerene, Canton; Dr. Leon B. Santee, Marlboro; Dr. W. C. Steele, New Berlin; Dr. N. W. Culbertson and Dr. D. W. Gans, Massillon.

Statement of Mortality in Chicago for the Week Ending January 27, 1906, compared with the preceding week and with the corresponding week of 1905. Death rates computed on United States Census Bureau's midyear population—2,049,185 for 1906—1,990,750 for 1905:

	Jan. 27, 1906.	Jan. 20, 1906.	Jan. 28, 1905.
Total deaths, all causes.....	504	611	558
Annual death rate per 1,000.....	12.82	15.55	14.61
Sexes—			
Males.....	286	338	312
Females.....	218	273	246
Ages—			
Under 1 year.....	103	123	118
Between 1 and 5 years.....	39	45	45
Between 5 and 20 years.....	35	42	48
Between 20 and 60 years.....	222	259	232
Over 60 years.....	105	142	115
Important causes of death—			
Apoplexy.....	15	15	12
Bright's disease.....	39	43	44
Bronchitis.....	9	19	15
Consumption.....	61	69	60
Cancer.....	22	36	16
Convulsions.....	14	13	12
Diphtheria.....	15	9	10
Heart disease.....	31	39	36
Influenza.....	3	6	9
Intestinal diseases, acute.....	29	21	16
Measles.....	2	3	5
Nervous diseases.....	30	29	30
Pneumonia.....	86	111	96
Scarlet fever.....	4	6	0
Smallpox.....	0	0	1
Suicide.....	6	7	6
Typhoid fever.....	7	5	7
Violence (other than suicide).....	19	30	33
Whooping cough.....	0	0	9
All other causes.....	112	149	141

Regrets and longing for "an old fashioned winter" should be tempered with congratulation and satisfaction that the public health of the city is better than for any corresponding January week on record. The 504 deaths reported are 107 fewer than those of the previous week and 54 fewer than those of the corresponding week of 1905. On the basis of population the annual rate of the week is 16.7, and 12.2 per cent. lower than for the previous week and for the corresponding week of last year respectively.

Pith of Current Literature.

AMERICAN MEDICINE.

January 27, 1906.

1. Some Problems in the Diagnosis and Treatment of Puerperal Infection, By B. C. HIRST.
2. Intestinal Hæmorrhage as a Fatal Complication in Amœbic Dysentery, and Its Association with Liver Abscess, By RICHARD P. STRONG.
3. Tropical Liver Abscess. Report of Three Cases, with Special Reference to the Blood Findings, By J. MORGAN COFFIN.
4. Cyst of Kidney Simulating Ovarian Cyst, By WILMER KRUSEN.
5. The Treatment in this Vicinity of Pulmonary Tuberculosis, By HAMILTON D. WEY.
6. Diphtheria Antitoxine Effective in Scarlatina, By J. H. LOPEZ.
7. Chronic Enlargement of the Tonsils as a Factor in Ætiology, By C. P. NELSON.

1. **Some Problems in the Diagnosis and Treatment of Puerperal Infection.**—Hirst confines his paper only to a few phases of this subject: the bacteriological examination of infected women as a means of precise and accurate diagnosis; the influence the results of this examination should have upon prognosis and treatment; the treatment of infection after labor by instrumental exploration and evacuation of the uterus; the present status of antistreptococci serum as a curative agent, and the lessons taught by practical experience in the operative treatment of puerperal sepsis by pelvic and abdominal surgery.

3. **Tropical Liver Abscess: Report of Three Cases, with Special Reference to the Blood Findings.**—Coffin reports in detail three cases out of a total of 34 cases of tropical liver abscess occurring in a period of three and two thirds years in the United States Army Division Hospital at Manila, P. I. From the total 34 cases he draws the following conclusions: (1) This condition should be known as hepatic amœbiasis, the words tropical and single both being faulty in describing it; furthermore, it is not a true abscess as the same is usually understood. (2) The amœba coli of Lösch is the exciting cause. (3) The routes of infection are the portal vein, over the peritonæum from the gut to the liver by amœboid motion, and through the common bile duct. (4) The leucocyte count is comparatively high and always a valuable guide in the diagnosis.

6. **Diphtheria Antitoxine Effective in Scarlatina.**—Lopez calls the attention to the value of diphtheria antitoxine in the treatment of scarlet fever. In an orphanage containing over 300 children there were many cases of scarlatina following an outbreak of diphtheria. To guard against the dangers of extensive mixed infection and for immunizing purposes antitoxine was liberally employed. The uniform dose in all cases in which the diagnosis of diphtheria could not be made was 1,000 units. In every case the results were favorable, but they were especially so in the anginose type.

THE BOSTON MEDICAL AND SURGICAL JOURNAL

January 25, 1906.

1. On the Development of Scientific Hydrotherapy, By JOSEPH H. PRATT.
2. Description of Killian's Frontal Sinus Operation, By E. E. FOSTER.
3. A Study of the Larynx in Tabes, By D. CROSBY GREENE.
4. A Contribution to the Ætiology of "Lateral Curvature" of the Spine, By MAX BÖHM.
5. Contusions of the Abdomen, By JOSHUA C. HUBBARD.
6. Brain Abscess. Operation, Recovery, By PHILIP HAMMOND.
7. A Case of Acute Meningitis. Operation, Recovery, By E. A. CROCKETT.
8. General Lymphosarcoma Especially Active in the Throat. Preliminary Report, By F. P. EMERSON.

1. On the Development of Scientific Hydrotherapy.

—Pratt calls attention to the scarcity of scientific hydrotherapeutical departments in dispensaries and hospitals, and to the fact that this method of treatment has not received the proper attention from our colleges. In 1902 thirteen out of the nineteen German universities gave special courses in physical therapeutics, many of which were devoted to hydrotherapy. In America, on the other hand, not one university gave a similar course. Von Leyden and von Mering in their textbooks give a great space to hydrotherapy. This is a significant sign of the drift of medical teachings in Germany, the abandonment of the search for drugs of supposedly specific action and the acceptance of methods of treatment without drugs. But America in this respect lags, according to the author, behind the European countries, although there are some indications that we are taking up this important branch of medicine. The admirable textbook on hydrotherapy, by Baruch, has been translated into German. Pratt then explains the physiological basis of hydrotherapy and describes the indications for hydrotherapeutical treatment, among them neurasthenia and other psychoneuroses. He concludes his article with a description of a hydrotherapeutical institute and the history of six patients, who were treated by this method.

2. Description of Killian's Frontal Sinus Operation.

—Foster, after a review of the several operations proposed for the treatment of chronic frontal sinusitis, describes the Killian method which in his opinion is superior to the others. Up to June, 1904, Professor Killian and his assistant, von Eicken, had performed 50 operations, and Killian gives the following indications for his method: 1, Necrosis; 2, symptoms of intracranial complications; 3, fever and a foul smelling discharge; 4, headache not relieved by intranasal treatment; 5, recurring groups of polypi in the frontal sinus and anterior ethmoid cells.

3. **A Study of the Larynx in Tabes.**—Greene reports two cases of laryngeal disturbances in tabes. Out of sixty cases examined in three hospitals, nine, or fifteen per cent., presented laryngeal complications; six, or ten per cent., showed undoubted paralysis of one or both vocal cords; and seven, or twelve per cent., were affected with laryngeal crises. The only form observed was abductor paralysis, and of the six cases, five were unilateral and only one bilateral, three were partial and five complete abductor paralysis.

5. **Contusions of the Abdomen.**—Hubbard describes seven cases of injury to the abdomen, and draws from these observations the following remarks: Should a person receive a blow upon the abdomen of any degree of force and is in a critical condition, careful observation should be rendered, for on slight changes in the physical condition depend the diagnosis and often the life. The absence of muscular spasm does not rule out an intraabdominal lesion while its presence makes such a condition the more probable. Hot applications should be applied to the abdomen and the pulse recorded at frequent intervals. The urine should be drawn by catheter, if the patient is unable to pass it. Should the pulse rate steadily rise even only slowly, or the abdominal spasm persist, or the urine be bloody, the case becomes distinctly surgical.

7. **A Case of Acute Meningitis. Operation. Recovery.**—Crockett narrates a case of suppurative leptomeningitis; the patient recovering after an early operation with drainage into the subdural space. This drain relieved the increased cerebrospinal pressure which so often kills the patients. He therefore pleads for an immediate operation.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

January 27, 1906.

1. The Present Status of the Surgery of the Stomach, By WILLIAM D. HAGGARD.

2. Science and Art in Medicine. Their Influence on the Development of Medical Thinking.
By JOHN C. HEMMETER.
3. Chorionepitheliomatous Proliferations in Teratomata, Especially in Those of the Testicle, with Three New Cases,
By ROBERT T. FRANK.
4. Fractures of the Olecranon Treated by Subcutaneous Exarticular Wiring,
By JOHN B. MURPHY.
5. A Case of Infantile Scurvy,
By GEORGE DOCK.
6. An Antigonococcus Serum Effective in the Treatment of Gonorrhœal Rheumatism,
By JOHN C. TORREY.
7. The Treatment of Gonorrhœal Rheumatism by an Antigonococcus Serum,
By JOHN ROGERS.
8. The Patent Medicine and Nostrum Evils,
By J. M. ANDERS.
9. Sodium Aurate: A Nonirritating Local Antiseptic of Remarkable Power,
By F. H. VERHOEFF.

1. **The Present Status of the Surgery of the Stomach.**—Haggard thinks that the typical indication for operative interference in the stomach is obstruction of the pylorus from an open or cicatrized ulcer causing dilatation of the stomach with stasis of food. The short circuiting operation of gastroenteric anastomosis finds its ideal indication here and has given most beneficial results. The complications of ulcer requiring operation are perforation and hæmatemesis of chronic ulcer. Other indications for operation are: Obscure and intractable dyspepsia; cancer; disabling perigastric adhesions; congenital stenosis of pylorus; fistula between stomach or pylorus and adjoining organs or even with the surface of the body; hourglass stomach; congenital hourglass stomach (Brooks); volvulus; tetany due to obstruction and dilation (Cunningham); spasm of pylorus (Reichmann's disease); subphrenic abscess; perforating wounds of stomach; nonperforating trauma (Monprofit); cirrhosis (Sheldon); foreign bodies.

2. **Science and Art in Medicine.**—Hemmeter uses this topic as an address at St. Johns College of Maryland. He says that medicine is not an exact science nor a perfect art. Medicine did not originate as a science, but by dire force of necessity. From centuries on centuries its treasures were gathered from experience only and were developed into an art by the genius of its representatives. The author gives a short review of the history of medicine. Coming to a conclusion, he says that in the eighteenth and during the first part of the nineteenth century, medicine was comparable to a sterile unproductive heath, in which some evil spirits drove about the speculating medical philosophers in a circle. Now we have gotten into an overfruitful swamp or jungle in which the facts grow so luxuriantly that they threaten to smother our thinking powers. Martius compares modern medicine to a sense confusing concert, and what is needed is a disciplinarian to instruct us concerning the leading motives, to seek the familiar law in the revealed wonders of the present time.

4. **Fractures of the Olecranon Treated by Subcutaneous Exarticular Wiring.**—Murphy describes a case of transverse linear fracture of the olecranon. The olecranon was divided into two halves, which were separated by a distance of three quarters of an inch. On account of the great separation of the fragments an operation was advised in such a manner that the two parts were drawn together subcutaneously by a fine aluminum bronze wire. After operation the elbow was put in extension and so maintained by an anterior plaster splint which was fastened by a bandage. This splint was temporarily removed on the third day and each of the following days to allow passive motion, and was entirely abandoned on the end of four weeks. Half a year later the patient was thoroughly reexamined. Both elbows were found to be similar in form, shape, flexion, and extension. Palpation of the fractured elbow revealed a perfectly smooth surface; in other words, there was no interruption in the continuity of the periosteum of the olecranon. No pain

on active or passive motion. The right elbow joint was functionally normal. Where the wires were twisted the continual mechanical irritation produced a small bursa, which did not inconvenience the patient in the least.

5. **A Case of Infantile Scurvy.**—Dock states that infantile scurvy is a comparatively rare disease everywhere, though becoming more frequent. Chiefly because of its infrequency, it is often unrecognized. He then narrates a case, from which he draws the following remarks: 1. Diagnosis. Striking alteration in the shape of the thorax and swelling and discoloration of the extremities; diseased gums; proptosis and subcutaneous hæmorrhage in the eyelids comes on later. 2. Ætiology. A monotonous food, composed of a milk mixture treatment. Treatment. Pasteurized milk, orange juice, small amount of potato and carrot broth.

6, 7. **Antigonococcus Serum in the Treatment of Gonorrhœal Rheumatism.**—Torrey reports a case of gonorrhœal rheumatism. The patient had suffered for about fifteen years, and had been treated in every other way without result. Dr. Rogers prepared a serum which was not only successful in this case, but also in a high proportion of others, in which it was tried. The culture for this serum was isolated from an acute case of gonorrhœa in a male patient who had not been treated. Gonococci were numerous. For purposes of inoculation a very satisfactory medium was a mixture of rich ascitic fluid and slightly acid beef infusion peptone broth in equal parts. Twenty to forty minims of the antigenococcus serum were administered hypodermically in the subcutaneous tissue in the back of the left arm, between five or ten days in the course of about two weeks. The results were very good.

8. **The Patent Medicine and Nostrum Evils.**—Anders says that laws should be enacted to compel all makers of proprietary articles to place the formula on the label of the bottle and that preparations containing poisons should be so marked. The medical students should be properly trained by their colleges and universities in the science and art of pharmacy and prescription writing. This, together with the education and enlightenment of the practising physician, would help to ameliorate the situation.

9. **Sodium Aurate: A Nonirritating Local Antiseptic of Remarkable Power.**—Recognizing the need of a local antiseptic combining effective germicidal power with lack of toxicity has led Verhoeff to make experiments which resulted in finding an antiseptic possessing these properties. The author dissolved one gramme of gold chlorid in fifty c.c. distilled water. The pharmacœia gives gold chlorid and sodium which must be used in double quantity, while the gold chlorid used is really hydrochlorauric acid. To this solution is added a five per cent. aqueous solution of sodium hydrate to produce a faintly alkaline reaction with ordinary litmus paper. One hundred c.c. of a one per cent. solution of boric acid is then added and the whole thoroughly shaken and so much normal saline solution added to make up 200 c.c. This can then be designated as a 0.5 per cent. solution of gold chlorid.

MEDICAL RECORD.

January 27, 1906.

1. The Ætiology, Prognosis, and Treatment of General Paresis,
By JOSEPH COLLINS.
2. The Therapeutical Value of Warm Moist Air and Hot Dry Air in the Treatment of Diseases of Children,
By THERON WENDELL KILMER.
3. The Pseudouræmia of Childhood.
By WOODBRIDGE HALL BIRCHMORE.
4. A Few More Words Concerning Mice and Pneumonia,
By E. PALIER.
5. Some Obstetrical Methods Practised in the Philippines,
By WILLIAM DUFFIELD BELL.
6. The Care of the Sick Outside of Institutions,
By BERTHA A. ROSENFELD.

1. The Ætiology, Prognosis, and Treatment of General Paresis.—Collins reviews one hundred cases of paresis, fifty from private practice and fifty from hospital practice. According to Kraft-Ebing syphilis and civilization are the main causes of paresis. It is probable that neither one is an adequate determining cause. The work of Ford Robertson, Douglass McRae, John Jeffrey, and L. C. Bruce which tends to show that the toxæmia of general paresis is of gastrointestinal and bacterial origin, seems to indicate that in general paresis there is constantly an infection of the alimentary and respiratory tracts by an organism indistinguishable from the Klebs-Löffler bacillus. Of his one hundred patients there were fifty-five who admitted, and were in a mental condition to state that they had had syphilis. Alcohol has a definite relationship to the development of general paresis, but here again, as in syphilis, the question arises whether or not it is itself a competent producing cause. It is the author's opinion that it is not. The excessive use of alcohol can cause a clinical picture resembling that of paresis, one to which the name alcoholic pseudoparesis is given, but that it can alone cause true general paresis is denied. Intensive mercurial treatment seems to be the chief factor. But the writer says that he has not seen it to be of any service whatsoever after the disease is fully developed, but it may be of use in the beginning of the disease. It seems to be generally admitted that paresis is incurable. The prognosis stands in certain relationship to the time of the diagnosis of the disease, the clinical type of the disease, and the age of the patient. If the disease can be detected in what Dana has called the præparetic stage, there is a chance of arresting it. The type of the disease that is least influenced by any kind of treatment is that form that begins insiduously, in which there is no symptom that stands out conspicuously to attract attention, and in which the patient often keeps to his occupation until a comparatively advanced stage of the disease. The prognosis in the young is bad.

4. A Few More Words Concerning Mice and Pneumonia.—Talier relates the theories about the sudden outbreaks of pneumonia and gives his own reason for it. In the months of December, January, February, and March, there are usually many mice in the houses, especially those whose plumbing is defective, and which are in a general poor sanitary condition. Mice, the author says, work themselves through under sinks, and hence are mostly abundant in houses where the plumbing is not open, where there are many nooks and corners around the sinks. Young mice seem to be especially abundant in the month of March and they are especially susceptible to the pneumococcus. The young mice come into the rooms to look for food; they can easily get inoculated with human sputum. These mice, either through their faeces, or after their death through their decomposing bodies, spread virulent pneumococci which may cause disease in man either by inhalation or by inoculation through some abraded surface. The author dissected two young dead mice which showed many pneumococci in smear preparations made from the blood. In poorly ventilated rooms the virulent pneumococci emanating from the faeces of infected mice or from their decomposing bodies, become abundant and the chances of contracting pneumonia are great.

5. Some Obstetrical Methods Practised in the Philippines.—Bell remarks that the popular belief that the child bearing women of a barbarous and semicivilized race escape many of the pangs their civilized sisters undergo, would receive quite a setback were a careful investigation made. The author had occasion to make observations during a stay of fourteen months in an inland town of Luzon. He describes the method and the mode of childbirth which is attended without any provision for sanitary, hygienic, or gynecological prin-

ciples. It is the crudest form and there are only a few women who do not receive a permanent injury. Bell collected one hundred and five cases from which he gives the results. He also says that much venereal trouble has followed in the wake of the Spanish, Philippine and American armies which have traversed the islands, while isolated towns and villages have escaped. The life of the native Filipino woman is comparatively short, due to her many pregnancies, much manual labor, insufficient food, and, most of all, to the crude, brutal, and ignorant practices.

BRITISH MEDICAL JOURNAL.

January 13, 1906.

1. Some Unusual Manifestations of Syphilis in the Upper Air Passages, By SIR F. SEMON.
2. The Reality of Enterospasm and Its Mimicry of Appendicitis, By H. P. HAWKINS.
3. Clinical Remarks on Pelvic Appendicitis and the Importance of Rectal Examination, By G. E. ARMSTRONG.
4. Diffuse Peritonitis from Perforation of the Appendix: Its Diagnosis and Treatment, with a Record of Fourteen Cases with Twelve Recoveries, By C. A. MORTON.
5. Remarks on Some Functions of the Omentum, By R. MORISON.
6. A Précis of the Conditions Under which Lunatics are Received in Continental Asylums, with a Special Note on Voluntary Boarders, By M. WYLER.

1. Syphilis in the Upper Air Passages.—Semon reports the following four unusual cases of syphilis of the upper air passages: 1. Precocious tertiary syphilis of throat and tongue. 2. Tertiary syphilis of larynx and trachea, followed by isolated tertiary syphilis of the nasopharyngeal cavity. 3. Early fibroid infiltration of pharynx and larynx in a case of obstinate recurring secondary syphilis. 4. Tertiary syphilis of the larynx manifested particularly by periodical inflammation, with production of ephemeral papillomatous excrescences. These cases show that whilst ordinarily it is easy enough to follow the established rules with regard to the diagnosis and treatment of manifestations of syphilis in the upper air passages, yet cases occur in which it is imperative not to be bound by rigid formulas. In the great majority of cases of syphilis of the upper air passages methodical inunction treatment is most successful. Yet in two of these cases it failed. In the first case the only remedy that could be used was Zittmann's decoction of sarsaparilla.

2. Enterospasm and Appendicitis.—Hawkins calls attention to the fact that the appendix is sometimes excised unnecessarily, which is evidenced by the fact that in some patients the symptoms are the same after as before this operation. Putting aside the rare cases of biliary and renal colic, movable kidney, and disease of the uterine appendages, there remains a class of cases in which we must conclude that the disorder is functional and has no basis of structural change in the intestine. It would save trouble could the true nature of the cases be recognized before the appendix is uselessly excised. The three chief intestinal neuroses, sensory, motor, and motor secretory, respectively, are enteralgia, enterospasm, and mucous colic. Enteralgia. The occurrence of a pure intestinal neuralgia is probable, but it is certainly rare. The pain is generally central, occurring in short, sharp attacks, quite as severe as renal colic. Vomiting is not a marked feature, the abdomen is retracted rather than distended, and the action of the bowels is normal. Mucous colic. This neurosis is closely analogous to asthma: in both neuroses there is a spastic element combined with the secretion of an abnormal mucinoid material. Ordinarily the

diagnosis is not difficult, but if the pain is in the right side, and the stools have not been examined, the appendix must inevitably come under suspicion. Enteropneum. Without any change in the intestinal wall, one or more sections of the intestine may exhibit a purposeless tetanic contraction, being converted into a hard, nearly solid cord, pale and bloodless. This spastic state is capricious and dependent on the mental state. The spasm may be short, acute, and intensely painful, or with less violence it may be of much greater duration and may result in a steady ache, persisting, off and on, for weeks or months. The colon is more commonly affected than the small intestine, its first and last parts particularly. So that the symptoms appear in the anatomical regions associated with the appendix and sigmoid flexure, respectively. Normal peristalsis may be completely perverted. The author has notes of thirty-five such cases, eighteen in men and seventeen in women. Only three were married. The age of the men ranged between 20 to 46 years, and that of the women between 21 and 48. All were neurasthenic in the sense that their nervous energy was rapidly exhausted by exertion of body or mind. All had a long history of constipation, either continuous for years or in attacks. None of them presented any obvious sign of disease apart from the abdominal trouble. The longest continuous individual attack lasted for eight months. As a rule the discomfort is distinctly relieved by a satisfactory action of the bowels. In nearly all of these cases some part of the colon can be felt as a hard cord about the size of a man's forefinger.

3. Pelvic Appendicitis.—Armstrong includes under the term pelvic appendicitis those cases in which the diseased area of the appendix lies over or below the brim of the true pelvis, and in which the pelvic peritonæum is primarily involved. The mortality is high in this group of cases, the chief reason being failure to make the diagnosis early. The misleading feature is absence of a characteristically tender point. Only deep pressure causes distress. In the early stage, when the disease is confined to the appendix only, deep pressure touches the sensitive spot, and if now a careful examination be made per rectum and by conjoined manipulation, an indefinite suspicion may be changed into a positive diagnosis. In operating the Trendelenburg position is of great value. The small intestines can be carefully protected and the deep pelvic cavity brought into view. Drainage is always necessary and convalescence is usually slow.

4. Diffuse Peritonitis.—Morton defines diffuse peritonitis as a peritonitis spreading widely in the lower abdomen, and not merely suppuration localized just around the appendix. In general peritonitis the whole peritoneal cavity is involved. He reports fourteen cases with twelve recoveries. The essential conditions of success in dealing with these cases are early operation, removal of the appendix, thorough sponging and free drainage.

5. Functions of the Omentum.—Morison has taught for years that the omentum has important protective functions—it is the abdominal policeman. It travels around the abdomen with considerable rapidity and is attracted by some sort of information to neighborhoods in which mischief is brewing. It occludes the sacs in inguinal, femoral, and umbilical hernia, guards suppurating glands in the mesentery of the small intestine, occludes holes in the diaphragm, isolates suppurating gallbladders, and the inflamed appendix, and guards malignant and other ulcers of the rectum, colon, stomach, and duodenum.

LANCET.

1. Aphasia (Lecture I), By B. BRAMWELL.
2. Professor A. E. Wright's Method of Treating Tuberculosis, By W. W. CHEYNE.
3. A Medley of Surgery (*Concluded*), By E. E. GOLDMANN.
4. The Pathology and Bacteriology of Serous and Purulent Pleural Effusions in Children, By J. G. EMANUEL.
5. A Case of Poisoning by Nitrobenzol, By A. H. H. VIZARD.
6. Strangulation of an Infantile Umbilical Hernia, By P. TURNER.
7. Two Cases Illustrating Sciatica of Abdominal Origin; Laparotomy, By F. W. FORBES-ROSS.

1. Aphasia.—Bramwell, in the first of his series of lectures on this subject, restricts the term aphasia to those derangements of speech which result from functional disturbance or organic disease of the cerebral speech mechanisms commonly and properly so called. The term speech should be restricted to vocal (articulate) speech and the other forms of speech which are generally considered to be the direct equivalents of vocal speech—e. g., the written speech of educated persons who possess all their faculties, the tactile speech of blind persons, and the finger speech and lip reading speech of deaf persons. Defects of pantomime should not be included under the term aphasia. The great primary forms of aphasia, word deafness, word blindness, vocal aphasia, and agraphia or graphic aphasia, are divided into subvarieties in accordance with the exact position of the lesion—i. e., whether it involves (a) the speech centres themselves or the nervous structures (the conducting fibres or portions of gray matter) which are situated (b) below or (c) above (on a higher cerebral level than) these speech centres. The following classification of the aphasias is suggested: A. Sensory or receptive aphasia. 1. Auditory aphasia (word deafness). 2. Visual aphasia (word blindness). B. Motor or emissive aphasia. 1. Vocal or motorvocal aphasia. 2. Agraphia (graphic aphasia). The subdivisions can be subcentral, central, and supracentral. In addition to these there can be intracentral or conduction aphasia, due to interruption of the connections between the sensory or motor speech centres. (e) Commissural aphasia due to interruption or destruction of the commissural fibres.

2. Wright's Treatment of Tuberculosis.—Cheyne discusses the method of A. E. Wright, consisting in (a) the use of tuberculin and its control by testing the opsonic index of the blood to raise the bacteriotropic powers of the blood; and (b) promoting the flow of the lymph. The theory is that the body defends itself against bacteric invasion by the development in the blood serum of substances termed opsonins, each bacterium leading to the development of its special opsonin, which coming in contact with the living bacteria weaken them and enable the phagocytes to complete their destruction. Cheyne holds that the determination of the opsonic index depends too much upon the personal equation of the observer; further that opsonins and phagocytes do not constitute the whole means of defense of the body against tubercle bacilli. Wright states that strictly localized infections do not tend to get well. This is only true in the case of lupus. If the surgeon employs substances which produce a flow of lymph through a tuberculous sinus, he is very liable to set up a mixed infection which tuberculin has much less power to cure. Tuberculin is a most valuable adjunct to surgical treatment, and should certainly be used. But to do away with all operation and blindly to convert the physician into an immunizer would be a totally retrograde step.

4. Pleural Effusion in Children.—Emanuel discusses the pathology and bacteriology of serous and purulent pleural effusions in children. About seventy-five per cent. of empyemata in children are due to the pneumococcus. In the majority of cases the pneumococcus is found pure, but it may be mixed with the streptococcus, the staphylococcus, the tubercle bacillus, Friedlander's bacillus, or the micrococcus tetragenus. Cases of pneumococcal empyema may be divided into two classes: (a) Empyema associated with pneumonia, and (b) empyema independent of pneumonia, the so called primary empyemata. Class (a) may be divided into 1. Peripneumonic cases accompanying pneumonia, and (2) metapneumonic cases secondary to pneumonia, in which the pneumonia does not end by crisis. The staphylococcus is not infrequently found in secondary empyemata, rarely in primary cases. It is rare to find the tubercle bacillus in purulent effusions. A pneumococcal is mild in comparison with a streptococcal or a tuberculous empyema. Considering the pneumococcal form alone there are three varieties: 1. A mild form, in which the pneumococcus remains localized in the pleural cavity. 2. A severer form, in which the pneumococcus spreads via the lymphatics and gives rise by direct extension to pericarditis, peritonitis, etc. 3. A very severe form in which the pneumococcus gains access to the blood stream and gives rise by metastatic infection to such complications as meningitis, cerebral abscesses, endocarditis, purulent arthritis, etc. Bacteriologically there is no essential difference between a serous and a purulent effusion; either one may be produced by the same organism. Cytological examination of the exudate in cases of idiopathic effusion may be of assistance in making a diagnosis. In tuberculous effusion there is a preponderance of small mononuclear cells (lymphocytes). In other inflammatory effusions the polymorphonuclear cells are the more abundant. In mechanical transudation the cells are fewer than in either of the foregoing varieties and consist of flat endothelial cells often in groups. Cytodiagnoses will not assist in distinguishing a rheumatic from a tuberculous pleurisy, for in both cases the effusion contains a preponderance of leucocytes. Examination of the blood is helpful here; in tuberculous pleurisies the number of leucocytes is usually below normal, while in rheumatic pleurisy there is generally a moderate amount of leucocytosis.

LYON MEDICAL

December 31, 1905

1. Enormous Latent Aneurysm of the Thoracic Aorta. By COLLET and GRUBER.
2. The Coincidence of Stenosis of the Ureter and Hypertrophy of the Prostate. By M. PHELIP.
3. Gastric and Duodenal Fistulæ after Pylorotomy. By R. LERICHE.

1. Aneurysm of the Thoracic Aorta.—Collet and Gruber report the case of a man 73 years of age who presented signs of bronchopneumonia and rather obscure cardiac symptoms and suddenly died. Autopsy revealed an aneurysm of the lower part of the thoracic aorta as large as a fist, which occupied the space between the sixth and twelfth dorsal vertebra and terminated two or three centimetres above the origin of the coeliac axis. Its cavity was almost wholly filled by a large, firm clot, which was very adherent to the wall.

3. Gastric and Duodenal Fistulæ After Pylorotomy.—Leriche reports the case of a man 28 years of age on whom pylorotomy was performed to remove a neoplasm. As a result of the operation a fistula formed at the level of the lesser curvature and gave exit at first to a large quantity of very acid fluid. It persisted in spite of an attempt to close it, gradually became smaller, and finally closed altogether.

PRESSE MEDICALE.

December 30, 1905

1. The Study of the Fæces for the Eggs of Intestinal Parasites. By MAURICE LETULLE.
2. The Transplantation of Veins and its Application in Surgery. An Experimental Study. By ALEXIS CARREL.

1. Study of the Fæces for Eggs of Intestinal Parasites.—Letulle urges the clinical usefulness of the microscope in the detection and recognition of intestinal parasites. The necessary outfit is simple and the technique is not difficult to acquire. Liquids are settled by the centrifuge and a drop is taken from the sediment for examination. Solid fæces are to be dissolved in water and the examination conducted then in the same manner as that of liquids. He describes six species of eggs which may thus be found: those of the trichocephalus, the oxyuris vermicularis, the ankylostoma duodenalis, the bothriocephalus, the ascaris lumbricoides, and the bilbarzia (schistosomum) hæmatobium, which may be distinguished by their forms, color, reflex, micrometric size, structure, and the artificial modifications produced by the action of the preservative fluid. The author then gives a full description, with an accompanying illustration, of each variety of egg, from which it would certainly seem as though a differential diagnosis would not be very difficult in most cases.

2. Transplantation of Veins.—Carrel describes transplantation of veins as of two varieties, uniterminal and biterminal. Uniterminal transplantation is the total or partial dissection of a vein and the attachment of one of its ends to an artery, another vein, or the heart. Biterminal transplantation is the junction of both ends of a segment of a vein with the cut ends of an artery or another vein. This is said to be complete when the venous segment has been completely extirpated from its connections, incomplete when the middle of the segment is left in its normal relations. The conditions indispensable to success in the performance of the operation are a technique such that the vessels may be united without producing obstruction or stenosis and perfect asepsis. As a result of his experiments the author claims that it is possible to reestablish circulation after the division of an artery by the biterminal transplantation of a vein between its ends, and that the venous segment is capable of performing the principal functions performed by arteries.

January 3, 1906.

1. Stovaine. By PAUL RECLUS.
2. Infantile Scoliosis. By P. DESFOSSES.
3. Carbohydrates and Diabetics. By ALFRED MARTINET.

1. Stovaine.—Reclus prefers stovaine to cocaine as a local anæsthetic, although it is difficult to understand from his paper that it possesses any marked advantage over the latter.

2. Infantile Scoliosis.—Desfosses presents some interesting portraits of several cases of scoliosis, but adds little if anything to the present state of our knowledge on this subject.

3. Carbohydrates and Diabetics.—Martinet divides the history of the management of diabetics with regard to carbohydrates into three periods: the classical, the critical, and the revolutionary. In the classical period the use of all starches and sugars was either prohibited or greatly restricted. In the critical their use was increased because of the inconveniences and dangers which attend a strictly albuminofatty diet and because of the remarkable tolerance to carbohydrates exhibited by certain diabetics. In the revolutionary period certain carbohydrates are recommended not simply as such as may be possibly tolerated, but as therapeutical means to be employed.

SEMAINE MEDICALE.

January 3, 1906.

Spirillæ, Spirochætæ and Other Microorganism with a Spiral Body, By Professor R. BLANCHARD.

Microorganisms with Spiral Bodies.—Blanchard gives a systematic description of these microorganisms, the number of which is considerable. They are divided into two families, the spirobacteria or spirillaceæ, and the trypanosomidæ. The family spirobacteria contains four genera, the spirosooma, vibrio, spirobacillus, and spirillum. There are two species of spirosooma, the nasale and linguale; five of vibrio, the comma, Massanah, Finkleri, Metshnikovi, and helcogenes; two of spirobacillus, the Cienkovskyi and gigas; seventeen of spirillum, the serpens, rugula undula, tenua, volutans, amyloferum, rubrum, endoparagogenicum, concentricum, terrigium, Kutscheri, coprophilum, subtilissimum, mobile, giganteum, sporiferum and colossus. Certain other microorganisms which have been termed spirillum belong elsewhere in this classification. The family trypanosomidæ contains four genera, the spirochæta, treponema or spirochæta of Schaudinn, the trypanosoma, and the trypanoplasma. The first named genus contains not less than twenty-one different species which are named and described at greater or less length, the second, treponema or spirochæta of Schaudinn, has only one species, the pallida, discovered by Schaudinn and Hoffmann, and supposed to be the characteristic microorganism of syphilis, while the trypanosoma and the trypanoplasma each contain several species.

PRESSE MEDICALE BELGE.

January 7, 1906.

The Medical Year 1905, By Dr. BOULENGIER.

The Medical Year 1905.—Boulengier briefly reviews the progress, particularly in Belgium, made during 1905 in science, hygiene, laws in regard to accidents while travelling, medical solidarity, and the popularisation of medical specialties.

BERLINER KLINISCHE WOCHENSCHRIFT.

January 5, 1906.

1. Traumatic Arthritis of the Knee, By HOFFA.
2. Dysentery Toxine (*To be concluded*), By H. LUEDKE.
3. Spirochæta Pallida in the Tissues, By A. BUSCHKE and W. FISCHER.
4. Enterogenous Cyanosis, By A. A. VAN DEN BERGH and A. GRUTTERINK.
5. Deep Injections of Alcohol and Cocaine or Alcohol and Stovaine and Neuralgias, By F. OSTWALT.
6. Röntgen Rays in the Treatment of Lymphatic Sarcoma, By M. COHN.
7. The Anticomplements, By J. BORDET.
8. Pneumothorax and Paralysis of the Recurrent Nerve, By LUBLINSKI.
9. Treatment of Habitual Constipation, By DE LA CAMP.

1. **Traumatic Arthritis of the Knee.**—Hoffa describes the clinical appearances of this affection first described by him. The patient feels constriction about the joint, and a swelling appears on each side of the patellar ligament. The affection consists of a subcutaneous injury to the joint which leads to an effusion of blood into it. The normal villi of the joint undergo proliferation and finally the subsynovial fat becomes converted into dense connective tissue. There are also accompanying changes in the synovial membrane. In neglected cases partial arthrectomy gives complete relief. The diagnosis is made by means of the Röntgen ray after the joint has been filled with oxygen.

3. **Spirochæta Pallida.**—Buschke and Fischer examined six cases of hereditary syphilis. In only one case were they able to demonstrate any considerable number of spirochæta in the spleen, liver, or kidneys. In the kidneys the organisms lay in the wall of the larger and smaller vessels up to the endothelial layer. The

authors are not certain if the spirochætæ can be found in epithelial cells.

4. **Enterogenous Cyanosis.**—Van den Bergh and Grutterink report three cases of so called sulphohæmoglobinæmia. All the patients were constipated, but as soon as the bowels could be made to move thoroughly daily, the symptoms disappeared. In one case, a nine year old boy, with anal stenosis and urethrorectal fistula, the symptoms disappeared after an operation for the relief of the anomaly. The symptoms in his case were cyanosis of the skin and lips, and the appearance of a triggerfinger. The authors describe also two cases of enterogenous methæmoglobinæmia which were also characterized by extensive cyanosis. By complicated methods, the authors demonstrated the presence of nitrites in the blood, especially in the blood cells by which the normal hæmoglobin was converted into methæmoglobin.

5. **Stovaine for Neuralgia.**—Ostwalt has improved Schloesser's method of injecting alcohol in cases of trigeminal and other forms of neuralgia. He adds, firstly, cocaine or stovaine to the alcohol, and, secondly, makes the injections very deep. Thus, he attacks the trigeminal nerve at its exit from the skull, before it gives off its branches. The results, after from two to four injections, are very satisfactory, even in chronic cases. Recurrences, however, take place, and are cured with difficulty. The same results attend the treatment of sciatica.

9. **Habitual Constipation.**—De la Camp considers the anatomical elements coincident with chronic constipation, and says that not infrequently they are responsible for the condition. The main elements of the symptom complex of chronic constipation are nervous anomalies of the intestinal wall, heightened blood pressure in the splanchnic region and autointoxication. He recommends suppositories of belladonna for the pains accompanying spastic constipation.

ZENTRALBLATT FUER GYNAEKOLOGIE.

January 6, 1906.

1. Cæsarean Section, By R. OLSHAUSEN.
2. Prevention of Fever in the Puerperium, By P. ZWEIFEL.

3. Vaporization of the Uterus, By K. BAISCH.

1. **Cæsarean Section.**—Olshausen reviews the indication and technics of the operation. Among the former are the presence of myomata and cancer, cardiac and renal disease, and eclampsia. Placenta prævia is regarded by some as calling for the operation. Among his recommendations for the performance of the Cæsarean section is the high site for the abdominal incision which should attack the uterus at its broadest portion, and must always extend above the umbilicus. The incision must avoid the placenta, the site of which can usually be recognized by the injection of the uterus by large veins. To avoid hæmorrhage after the operation, Olshausen recommends the hypodermic injection of ergot about twenty minutes before the section. Hæmorrhage during the operation is not to be feared if the incision is kept in the median line of the uterus and if the placenta has been avoided.

2. **Fever in the Puerperium.**—Zweifel, in a lengthy statistical paper, reiterates his statement that much of the fever seen in the puerperium can be avoided by a routine removal by dry sponging of the clots which fill the vagina immediately after labor. He shows by figures how the morbidity in his clinic has been thus reduced. Autoinfection is considered entirely possible in many cases. Since the introduction of his method, the lochial discharge, has been noticed to have been less profuse and less putrid, and does not last as long. Zweifel insists, however, upon the rigid observance of all the forms of asepsis in the conduct of labor.

3. **Vaporization of the Uterus.**—Baisch concludes from his studies that all infective cases, whether sep-

tic or gonorrhœal, whether of the uterus or of its appendages, offer a contraindication to vaporization of the uterus. The only cases left for the method are the uncomplicated ones of preclimacteric hæmorrhages.

ZENTRALBLATT FUER INNERE MEDIZIN

January 6, 1906.

1. A Case of Carcinoma and Tuberculosis of the Lungs Diagnosed During Life, By F. JESSEN.
2. A Case of Typhoid Fever with Slight Agglutination in Production, By R. MASSINI.

1. **Carcinoma and Tuberculosis of the Lungs.**—Jessen records such a case in which the diagnosis was made during life and confirmed by autopsy. During the course of the illness, the tubercle bacilli disappeared from the sputum and the agglutination test diminished until it was similar to that in the nontuberculous. The diagnosis of cancer was based upon an increasing dulness in the right anterior portion of the thorax with signs of compression of the thoracic vessels of that side and an increasing cachexia despite the absence of characteristic cells in the sputum. An obliterating pericarditis was not diagnosed; there had been no pulsus paradoxus, although the heart sounds had been very faint.

RIFORMA MEDICA.

January 6, 1906.

1. Pulmonary Tuberculosis, By A. MURRI.
2. Further Data Concerning the Phenomenon of Cardarelli-Oliver and the Signs of Adhesion Between an Aortic Aneurysm and the Air Passages, By S. PANSINI.
3. Contribution to the Study of Adamantinoma of the Lower Jaw, By FERRUCCIO FERRERO.
4. Does a Special Form of Red Blood Cells Occur in the Blood of Patients with Precocious Dementia? By GIUSEPPE MUGGIA.

1. **Pulmonary Tuberculosis.**—This is one of the series of lectures recently delivered at the University of Bologna by Professor Murri, who deals especially with tuberculosis and its treatment in private practice. The physician who early recognizes tuberculosis is the one who does his full duty to his patient. It would be easy to make the diagnosis if all patients would spit and if all tuberculous sputum would contain bacilli, but unfortunately, this is far from being so. If the patient does not cough we can excite him to cough for a while by some artificial method. The inspection of the larynx which this procedure presupposes is also a useful precaution, inasmuch as 50 per cent. of persons affected with pulmonary tuberculosis also have laryngeal tuberculosis, although it is true that the latter rarely occurs without a change in the voice or a cough. The injection of Koch's tuberculin is also a means of diagnosis that can be employed at an early stage. Opinions are divided as to the value of the febrile reaction which occurs after such injections, as a positive diagnostic sign of tuberculosis. If the dose is very small, a positive result has no value; if the dose is large, the fever that may follow may be due to other causes than tubercle bacilli in the system. Four hundred soldiers in an Austrian regiment were recently given injections of tuberculin and 61 per cent. reacted positively. It is of course possible that these soldiers had latent tuberculosis, but this is not probable, as Murri proved some time ago by injecting all patients in the hospital without distinction and obtained a febrile reaction, not only in those in whom tuberculosis could be excluded during life, but also in patients who after death showed no tuberculous lesions. Tuberculin is a very useful diagnostic and curative measure in sanatorium work, but it is not an absolute test, and should be used only in special cases. It is better to fail in doing a little good to everybody and to retain the consciousness of having harmed nobody. As regards the agglutination reaction, a definite judgment must as yet be reserved. A great many more clinical experi-

ments must be undertaken to show its value. There is no question that agglutination occurs in tuberculous patients, but what does this signify? Agglutination *per se* is of no value, save possibly that it may give rise to a suspicion. It is certainly of value, however, when accompanied by other indications of tuberculosis. The conclusion from all this is that the early diagnosis of tuberculosis cannot be made in the laboratory, and that these tests are of value only in conjunction with a clinical examination.

2. **Adamantinoma of the Lower Jaw.**—Ferrero reports a case of adamantinoma, a very rare tumor of the lower jaw. The patient was a woman, aged forty-four, who had been suffering from toothache for some time. Six years before admission to the hospital she noticed a swelling near the angle of the lower jaw which grew slowly, gradually extending to the inner aspect and projecting into the mouth. In 1899 the diagnosis of dental cyst was made, and the tumor was removed, most of the wall of the cyst being resected, and the lining scraped. In 1900 and 1904, the tumor recurred again in the form of a cyst, and was excised and scraped. The growth was found to consist of two classes of tissue, epithelial and connective. A number of epithelial cysts of various sizes containing an amorphous or granular substance were also found in this tissue. The connective tissue consisted of homogeneous hyaline substance with few nuclei, but many blood vessels. In the bony tissue, which was found to be part of the lower jaw, were found numerous delicate trabeculae surrounded by an osteoplastic stratum. This tumor was not malignant in character, and the most appropriate name for it was adamantinoma, a name applied to tumors of this sort, in contradistinction to odontomata, which are connective tissue tumors arising from the cement and dentine of the teeth, or from dental cysts which contain one or more teeth within their cavities.

ROUSSKY VRATCH.

December 10, 1905.

1. The Anatomical Theory of the Radical Treatment of Hernias, By R. I. VENGLOFSKY.
2. The Pathology of Tuberculosis of the Bones and Joints, By N. N. PETROFF.
3. The Pathogenesis of Intermittent Hæmoglobinuria Due to Cold (*Concluded*), By A. V. KHOROSHILOFF.
4. Abscess of the Brain Due to Otitis. Operation. Recovery, By P. K. BROSHNIOWSKI.
5. The Influence of the Animal Organism Upon the Properties of the Streptococcus: Biochemical Properties (*To be concluded*), By A. DVUZHILNI.

1. **Radical Cure of Hernias.**—Venglofsky describes a method of radical operation for inguinal hernia in which the sac is not dissected out from the surrounding tissue, but is allowed to remain, no matter how large it may be, and is permitted to atrophy. The separation of the sac, which amounts to tearing out, in many cases has a very unfavorable effect upon the cord and complicates the postoperative course of the case. While the author recognizes Bassini's method as undoubtedly the most efficient, he insists that all methods thus far devised have the disadvantage of not fulfilling the object of radical treatment, which includes not only the destruction of a hernia already present, but also the removal of the anatomical predisposition to hernial protrusions. Bassini's operation is also objectionable on account of the fact that it destroys the normal relations of the spermatic cord, and all methods involving the dissection of the hernial sac produce marked changes in the vas deferens. Atrophy of the corresponding testicle is not infrequent after radical operations for hernia. It is for this reason that the author avoids the dissection of the sac. Venglofsky reports 30 operations performed with this method, and in none of the cases did a relapse take place.

3. **Origin of Intermittent Hæmoglobinuria.**—Khoroshiloff reports two cases of cyclic hæmoglobinuria from which he draws the general conclusion that this affection is a special disease of the red blood cells, probably arising from lesions in the blood forming organs, and is not as most authors assert the result of autoinfection nor of nervous disease. In the second case reported the affection seemed to be syphilitic in origin, as the patient had had syphilis a year and a half previously, though the administration of iodides were not followed by a cessation of the paroxysms of hæmoglobinuria. In the first patient the aetiology was less clearly defined. The patient had suffered from malaria twenty years previously, but the attack lasted but two weeks and left no signs of malarial poisoning. The total exclusion of syphilis was not possible, as the patient admitted having had an ulcer upon his genitals, an admission which should always excite a certain amount of suspicion. The treatment of this patient with sodium iodide proved of considerable benefit.

Letters to the Editors.

WATER AS A LOCAL ANÆSTHETIC.

19 WEST THIRTY-FIFTH STREET,

NEW YORK, January 20, 1906.

To the Editors: Since publishing the article on Water as a Local Anæsthetic in the *Journal* of January 6th, my attention has been called to a publication on this same subject in the *Nouveau dictionnaire de médecine et de chirurgie pratiques*, No. 11, 1869, by Dr. Georges Dieulafoy, in which this writer says: "It is possible in the great majority of cases to relieve pain immediately by the hypodermic injection of from eight to ten drops of cold water."

In the *New York Medical Journal*, volume xxiii, 1876, page 603, Dr. S. Henry Dessau, in an article entitled Hypodermic Injections of Cold Water for the Relief of Pain, refers to the February number of the *Medical News and Library*, which contains an extract from an article in the *Union médicale*, by Dr. Lelut, on this subject. Dr. Dessau cites a number of instances in which he relieved pain by the hypodermic injection of ten minims of cold water.

In the *Medical Record* of November 14, 1891, Dr. R. H. M. Dawbarn, of New York, shows that Schleich was not the discoverer of the method, and credits it to Dr. William S. Halsted, then of New York, later of Johns Hopkins Hospital, Baltimore.

My article was not intended as in any way to lay claim to the discovery of a new local anæsthetic, but to call attention to its satisfactory employment in certain minor surgical operations.

JOHN A. WYETH.

CARBONIC ACID GAS IN MEDICINE.

1113 MADISON AVENUE,

NEW YORK, January 4, 1906.

To the Editors: A few days ago a little book, *Carbonic Acid Gas in Medicine*, by our friend and strenuous worker, Dr. Achilles Rose, came into my hands. I have long known of Dr. Rose's work on this theme and have made reference thereto in so far as it related to the intestinal tract in my book on *Constipation in Adults and Children*, etc. Here I want only to add my testimony, personal observation, to the value of the carbonic acid gas treatment in those hyperæsthetic conditions of the nasal mucous membrane which are so dreadfully annoying to the patient.

The subject of this observation, a lady, began to have all the manifestations of hay fever, or rose cold, paroxysms of sneezing, watering of the eyes, etc., in the early spring of 1902. This continued throughout the year and all the following year, 1903, until the

early spring of 1904, the paroxysms growing steadily in severity, lasting longer, from fifteen to twenty minutes, becoming more frequent through the day, and later on setting in, not infrequently, during the night. The other symptoms, the watering of the eyes, the stuffed nose, the headaches, became aggravated and the general condition was altogether much impaired. All this despite numerous remedies, regular and irregular, and expert treatment.

At about the time last named, the early spring of 1904, having shortly before learned from Dr. Rose of the beneficial action of carbonic acid gas in this affection, I advised—merely as *amicus curiæ*—a resort to this measure. This was done, and from the initiation of the treatment the patient began to improve; the paroxysms became less severe and shorter in duration, the other symptoms became ameliorated, and at the end of three months she was entirely cured. There has been no return since and, what is more, she very rarely has a cold in the head now, in marked contrast to the frequency with which she contracted such in former years.

Although hay fever is rather a periodical affection limited to certain seasons of the year, still there can be no question that it may take on such a severe form as here described. I have seen a few such cases. Further proof that this was an attack of hay fever is in this: During the past summer the lady, on one of her outings, passed through a field of golden rod and immediately began to sneeze. She stopped as soon as she was past it. On her return home the same day, as a precautionary measure, she resumed the applications of the gas and continued them for several days.

H. ILLOWAY.

THE EGG IDIOSYNCRASY.

TAYLORVILLE, ILL., January 17, 1906.

To the Editors: In the number of your journal for January 6th you print an observation on An Idiosyncrasy in Regard to Eggs in which you express a doubt as to the egg being actually poisonous. Of course it is an idiosyncrasy and has been observed elsewhere. My brother once boarded in a family in which one of the daughters was so sensitive to the poisonous effects of eggs that she could not eat cake containing them or drink coffee in which egg had been used to settle it. Further, when she washed dishes upon which eggs had been served and eaten, a marked urticaria soon appeared on her hands and arms as far as the water touched them. While I never saw this urticaria myself, I have observed that the lady could not be induced to eat any article containing eggs, and gave that as her reason.

D. D. BARR.

Proceedings of Societies.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

One Hundredth Annual Meeting, held in Albany on Tuesday, Wednesday, and Thursday, January 30 and 31 and February 1, 1906.

The President, Dr. JOSEPH D. BRYANT, of New York, in the chair.

The President's Inaugural Address.—Dr. BRYANT said that the supreme feature of the present meeting was the satisfaction of all at the reunion of the medical profession of the great State of New York. This had been looked forward to with interest by all the medical profession of the country. Now the Empire State could take her proper place of influence in all medical matters. There would no longer be the rea-

son, or rather the excuse, that had so often hampered the securing of legislation in the past that the members of the medical profession were not agreed among themselves. Dr. Bryant announced that the Medical Society of the State of New York would be fully represented at the meeting of the national body in Boston, and said he hoped that a large number of representative members of the society would be present at the meeting.

Committee of Conference Report.—Dr. HENRY L. ELSNER, of Syracuse, made the report. This of course included the announcement of the judicial consummation of medical reunion in the State, and gave some of the details. The committee asked for the continuation of its powers and for the approval of the arrangement by which the officers of the society and of the association, together with the Committee of Conference, composed the ad interim House of Delegates. It was suggested that the main hope which the committee looked forward to was the stimulation of interest in the county medical societies in order to secure an increased membership for the new State organization.

When Dr. THOMPSON presented a resolution asking for the continuance of the ad interim House of Delegates until the annual meeting in 1907, there was a moment of suspense because of the presentation of an amendment allowing delegates from the county societies elected to be allowed to sit in the House of Delegates during the present year. After some discussion, however, in which it was pointed out that the adoption of such amendment would be contrary to the legal arrangement made by the court, the president ruled that the amendment was out of order, and the original motion was carried unanimously.

New Surgical Prize Established.—Dr. LUCIEN HOWE, of Buffalo, presented a check for \$1,500 to the society, the annual interest of which is every year, or as often as an essay worthy of it shall be presented, to be given to the writer of the best work on some surgical subject, preferably in ophthalmology, which shall show evidence of original research. The prize winner need not necessarily be a member of the society.

Dr. JACOBI presented a resolution accepting Dr. Howe's generous gift, and also giving the thanks of the society for his thoughtful consideration and for his encouragement of one of the best works that the society had in hand.

Remarks of the President of the American Medical Association.—Dr. LEWIS S. McMURTRY, of Louisville, the president of the American Medical Association, was then presented and congratulated the society on its return to the fold of the American Medical Association. There had, however, been a general feeling all over the country of anticipation, and the culmination in reunion had aroused universal pleasure. The American Medical Association owed its origin to the Medical Society of the State of New York, and the daughter organization now gladly welcomed back the mother society. Organization was the watchword of the day. Nowhere was it needed more than in medical matters. Medical men needed to be united, not so much for their own benefit as for the benefit of the public. At the present there were probably one hundred and twenty thousand practising physicians in this country. Not more than 40,000 of these belonged to any medical society. It was necessary that large numbers of physicians should be brought in touch with medical organizations. This was true, not only for the country doctor, but also for the busy city practitioner who thought he had not the time to attend medical society meetings. Medical reunions would do more to elevate the profession than any other single measure.

The Art and Science of Fitting Glasses.—Dr. A. E. DAVIS sketched something of the history of the use of glasses. The use of spectacles was first discovered

by Roger Bacon in the thirteenth century. The only lenses used were the simply spherical glasses meant for old people. Then there was no development further for over six centuries, to the beginning of the nineteenth century. The first advance was the discovery by Thomas Young of his own astigmatism. Airy, the astronomer, first corrected his astigmatism by the use of cylindrical glasses in 1837. During the sixth decade of the century Helmholtz discovered the ophthalmoscope. Donders took up the fitting of glasses and developed the science of the art in 1864. With regard to eye strain and its reflex action, American physicians had done more than any others to make the world appreciate its significance. S. Weir Mitchell had almost more than any one else taught how many symptoms might be caused by errors of refraction. Dr. Davis considered that cycloplegics had been very much abused in ophthalmological practice, and he himself unlearned the use of them in patients over ten years of age. Since he had dropped their use he had had to change fewer glasses, and, as it was results that ophthalmologists were looking for, this was a decided advantage. Whenever he found that he had to change glasses within six months after prescribing them, he usually considered that he himself had been at fault. With regard to muscular insufficiency, he had not had satisfaction in attempts at correcting this defect by means of glasses. He considered that in this matter there had been an exaggeration of the remedial effect that could be produced by mechanical means. The use of prisms then had seemed to him inadvisable, and he preferred to treat these cases by general tonic measures.

Dr. VALK, of New York, said that convex glasses would not correct muscular deficiencies, and these required special correction.

The Use of Mydriatics.—Dr. A. G. BENNET, of Erie County, said that while Dr. Davis was a convert to the doctrine of the nonemployment of cycloplegics, he himself was a pervert to that doctrine, and believed that in many cases the use of a mydriatic enabled the physicians to select glasses with more assurance. How much allowance was to be made for the difference between an eye under the influence of a cycloplegic and one without it was an art and not a science. There was certainly no harm likely to be done by its judicious use. He had had more than 10,000 cases in private practice without a single bad result. Low errors of astigmatism could not be corrected absolutely without a cycloplegic if patients must go to work with their eyes at once. Then homatropine should be used, followed at once by eserine. These patients might then be confident that they would have no discomfort and would be able to read within an hour. Dr. Bennet considered that correction of muscular deficiencies was quite as important as the use of mydriatics.

Dr. CONNOR, of Detroit, said that it was important not to give the opticians a hold by which they might secure the passage of an optometry bill. The treatment of the eye with glasses required all a physician's skill, and not merely a mechanical training. Personally, he had been taught in New York years ago that mydriatics were of no use. He had found in his practice that they were practically indispensable in most cases. He had seen individuals who had been fitted with glasses by most distinguished specialists, and yet had no comfort until there was some correction by a prism of their muscular insufficiency. In one notable case the prismatic correction was only slight, yet the patient had been comfortable for fifteen years.

Dr. HUBBELL, of Buffalo, said that he also challenged Dr. Davis's ideas with regard to cycloplegics.

Dr. DAVIS said that he treated muscular insufficiency by general tonics. Cycloplegics were more dangerous than is usually admitted. Even so mild a mydriatic as

homatropine had on several occasions produced glaucoma. Hence the necessity for extreme care in their use in persons beyond middle age. Personally, he believed in their use in certain cases, but not as a routine matter.

The Immediate Treatment of Eye Injuries.—Dr. ALVIN A. HUBBELL, of Buffalo, suggested that eye injuries came first to the observation of the general practitioner. As a consequence he should have a definite idea as to what to do. Injuries of the external parts of the eye might be treated at once with ordinary surgical precautions. When they affected the more important structures, however, great care must be exercised. A penetrating wound must not be probed, because of the danger of infection. In general, it must be presumed that when some invisible object had caused a perforation of the cornea or sclera, the foreign body was within the eye. The contents of the eye furnished an excellent soil for infectious material. Intraocular disinfection by means of iodoform had been shown to be possible at least to the extent of hampering the growth of microbes. Purulent infection of the eye did not produce sympathetic ophthalmia, while the removal of the eye was sometimes followed by this serious condition, and besides, the operation of itself might lead to meningitis.

Typhoid Fever.—Dr. LUZERNE COVILLE, in this paper, said that the aspect of typhoid fever had changed very materially in recent years. In many cases of typhoid fever bacteria might be discovered in the blood very early in the disease. They had been found as early as the first, second, and third days by conservative observers, and at the time when the Widal reaction was still negative. It would seem that they occurred in the blood always earlier than this reaction. A number of cases of typhoid had been found in which there were no intestinal lesions. Typhoid fever might last only a few hours apparently in some individuals. Such cases had been known to occur in epidemics where the mortality was very high. The incubation period lasted very variably. In one case a prisoner had his only opportunity for infection apparently 141 days before the disease broke out. A suicide who drank deliberately a pure culture of typhoid bacilli had the disease in three days. In most cases the incubation period was from twelve to fourteen days. A sister in a Russian hospital, who drank by mistake some urine from a typhoid patient contained in a wine glass, had the disease in thirteen days. On the other hand, enthusiastic German investigators had taken portions of fresh typhoid stools without having the affection. It was evident that those that were brought in contact with typhoid patients acquired after a time a certain immunity to the disease. This was exemplified by the cases of the German observers just mentioned, who thought, however, that they were demonstrating the lack of virulence in fresh typhoid stools. It was because of this immunity that physicians and nurses did not suffer more from the disease. The carelessness which was sure to exhibit itself occasionally would otherwise make many of these victims. As a matter of fact, in epidemics not more than two per cent. of the cases ever occurred in nurses or doctors. It was important not to waste the strength of the patient, and consequently the limitation of the diet to milk alone was not advisable. The use of cold baths was for the same reasons of questionable utility.

Dr. F. P. KINNICUTT, of New York, said that cold baths undoubtedly had very much reduced the mortality from typhoid fever. In his wards in the Presbyterian Hospital they were used as a routine measure whenever the patient's rectal temperature went above 102° F. Their effect was mainly not upon the temperature, but upon the patient's nervous system. They improved him in every way. There was less delirium

and much better digestion. There was scarcely a bad tongue to be seen in the wards. Hemorrhage and perforation were not less frequent, but they were by no means more frequent, and the patients' general condition was very much better.

Dr. DELANCEY ROCHESTER, of Buffalo, said that true recurrences of typhoid fever were extremely questionable. It seemed not unlikely that in most cases the reason for the supposed recurrence was a complication in the gallbladder, in the ear, in the appendix, or in some other previously unaffected organ. These easily run a latent course and might not be recognized at all. With regard to large injections by the bowel, Dr. Rochester considered that they should always be made with some antiseptic material. Otherwise there might be retention of the fluid with serious results. Mild diet need not be absolute in typhoid fever, since raw eggs and beef juice could be added to the diet with advantage.

Dr. STILES, of Owego, said that the most important feature of the treatment of typhoid fever was to treat each patient as an individual. No single method could be of avail in all cases.

The Oration in Medicine was delivered by Dr. SAMUEL B. WARD, of Albany. He reviewed especially the contributions to medicine and surgery during the past century and the progress of medical practice, as it could be seen in the *Transactions of the Medical Society of the State of New York*. Careful studies of epidemic diseases were made by members of the society early in its history, but, the mystery of their causation being as yet hidden, little progress in knowledge was secured. Cholera occurred in New York on several occasions during the first half of the last century, and investigators confessed that no cause for it could be traced and that a frank admission of ignorance seemed better than a pretense of knowledge. Intermittent fever occurred wherever the soil was turned over afresh, and it was recognized that quinine was almost a specific for the affection. There was a general feeling, however, that it should not be used when the tongue was coated and the digestion disturbed. In many of these cases ordinary home remedies seemed to be efficient, and occasionally mental suggestion had its influence. A not unusual procedure in country places was to make as many knots in a string as the patients had had attacks of fever, and then consider that the patient would get better. This was called hanging up the fever. In other cases patients were advised to go up a ladder or stairs feet first, returning in the same attitude. Cures were secured by these means, and it was evident that suggestion played a large rôle and that Mrs. Eddy was not the first to use this principle upon the ailing.

The *Transactions* showed many fads in medicine at various times. About the middle of the nineteenth century hydrotherapy was the great fad, and one of its adherents maintained that at last the treatment of disease was founded upon a rock and a sure basis for remedial measures in all diseases had been found. Homœopathy received much attention about the middle of the century, the regular profession being engaged in calling attention to its lack of proper principles.

It was investigations made by committees of the society which had led to the improvement in the care of the insane, of deaf mutes, and of the blind. Besides, many of the methods by which diagnosis and therapeutics were improved were introduced to the American profession by articles read before the society. In 1860 an important article on hypodermic medication appeared. In 1871 a paper on the use of the thermometer was read and attracted widespread attention. In 1865 the first papers on a special subject, namely, on diseases of the eyes, were read. This was the first time specialists occupied the attention of the sessions.

The Oration on Sanitation was delivered by Dr. HERMANN M. BIGGS, of New York, whom the president introduced as having made for himself and the city of New York a worldwide reputation because of the progress of sanitation which had occurred under his direction in the New York Department of Health.

Dr. BIGGS said that in mediæval populations, in spite of the high birth rate, there was no increase in population, because of the extremely high death rate. Fortunately there were no large cities at the time. It was doubtful if with the extreme insanitary conditions large cities would have been possible. The first definite statistics were made in the seventeenth and eighteenth centuries. About 50 per thousand of the population died each year. In cities this number rose to 60 per thousand. In 1720 London had a death rate of over 60 per thousand. During twenty years before the middle of the eighteenth century the death rate was 70 per thousand. It was now less than one quarter of that. At the beginning of the nineteenth century the death rate was probably 40 per thousand. In 1830 it had fallen to 32 per thousand. By the end of the century it was scarcely more than half of that. The expectation of life during the century had risen from under thirty years to over forty-two. Smallpox had been one of the most serious causes of death, and it had now sunk to be an insignificant fraction of the death rate. It was recognized long ago that certain factors produced a lessening of the death rate. These factors were the supply of good water, the establishment of sewerage systems, and that of proper ventilation. In Greece and Rome these were attended to, and Hippocrates warned particularly with regard to impure water, and especially waters that came from marshes or stagnant pools. The sewerage works of old Rome were still most impressive monuments. All these sanitary measures were lost during the mediæval period, though the old water conduits in Rome remained. It was only during the nineteenth century that the proper sewerage of cities had been accomplished. The first city to supply a complete system of water and sewerage was Dantzic, in Germany. The finest example of sewage disposal was in Berlin, the German capital. It scattered its sewage over an immense tract, where it could do absolutely no harm.

Sewers were introduced into New York in 1840. The water supply had come earlier, but at the beginning of the century pumps and wells were the only sources of water. These became impure and caused many epidemics. There was a constant increase in the death rate in New York city until 1866, when the citizens became alarmed and resolutions were adopted that led to the establishment of the present department of health. Since then, notwithstanding the presence of cholera and of typhus fever on several occasions, no serious death rate from epidemics had occurred. The death rate from smallpox had been kept well under control. Diphtheria had been very much reduced in mortality, especially during the last ten years. At the present time the number of deaths was scarcely more than one fifth what it was in 1894, before the introduction of antitoxine. During that time at least 3,000 lives had been saved. In the other infectious diseases, measles and scarlet fever particularly, there had been not much reduction in mortality. In pneumonia there had even been an increase. These were the problems of the future. In tuberculosis there had been a marked reduction.

American Medicine.—In Dr. WILLIAM OSLER's unavoidable absence, Dr. WILLIAM H. WELCH, of Baltimore, delivered an address on the progress of medicine in America during the hundred years that the society had been in existence. He emphasized especially the fact that in this country circumstances over which they had no control had compelled physicians

to devote themselves until recent years to the cultivation of the art rather than the science of medicine.

In spite of hampering conditions in our new country, many American physicians had succeeded in leaving the impress of their genius and personality on the history of clinical medicine. Far from being laggards, many were in the forefront of medical progress. Dr. Welch recalled the familiar names of the patriarchs of medicine, the teachers whose inspiration not only kept the torch burning, but passed it on to the next generation still brighter aflame than before. Now that conditions had changed and opportunities for research were multiplying, there was already abundant evidence that American enthusiasm and enterprise would enable the rising generation to do more than emulate the fathers in medicine on this continent, who worked so nobly and withal so successfully in spite of a discouraging environment.

(To be continued.)

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of November 22, 1905.

The President, Dr. JAMES M. ANDERS, in the chair.

The Quantitative Estimation of the Stomach Contents.—Dr. JOSEPH SAILER presented this paper. He stated that the stomach contents removed after the administration of a test meal consisted of the test meal less the portion that had passed into the intestines, the saliva mixed with the test meal when it was ingested, the mucus of the stomach, and the gastric juice that had been secreted less the portions that had passed with the test meal downward. To secure a more exact analysis of gastric contents than that obtained by the customary method, there were required an estimation of the total contents at the time the test meal was removed and an estimation of the amount of test meal that had passed from the stomach. If these two factors were known, the chemical analysis of the stomach contents could, by means of a little calculation, be made to indicate the exact composition of the gastric juice and also the degree of motility of the stomach. The methods for determining the total gastric contents depended upon the principle first suggested by Mathieu and Rémond, that, if a portion of the gastric contents was withdrawn and a definite amount of water added, the estimation of the diminution of some substance present as the result of the dilution would indicate the remainder of the gastric contents. Mathieu and Rémond simply used the total acidity. Other observers had used salt, sugar, fat, or the specific gravity of the gastric contents. When the total amount was known the estimation of the reduction of some measurable substance, of which a definite amount had been added with the test meal, made it possible to determine what proportion had passed into the intestines. For this purpose Mathieu and Hallot and Salle had employed different forms of fat, and Meunier a solution of sulphate of iron.

In working with Mathieu and Rémond's method Dr. Sailer had found that the introduction of one or two modifications seemed to facilitate it and render it more accurate. It made no difference what test meal was employed. His plan was as follows: When the test meal was removed in the ordinary manner, 300 c.c. of water were poured down the tube, mixed by pinching the tube between the bulb and the funnel and then squeezing and relaxing the bulb ten times. This was then removed, diluted with one part to nine parts of water, and the total acidity estimated two or three times. The second portion was then estimated in the ordinary way, using 50 to 100 c.c. in the estimation. The proportion was then ascertained.

The Treatment of Certain Phases of Gastric Indigestion.—Dr. J. DUTTON STEELE, in a paper thus entitled,

said that the majority of patients with hyperacidity suffered from the type of stomach pain which occurred after the height of digestion and was relieved by food and alkalies, and that a few patients with hyperacidity had no gastric symptoms whatever; on the other hand, this type of pain also occurred in cases of normal acidity or subacidity. The explanation was that to have symptoms in hyperacidity there must be a sensory neurosis of the stomach producing hyperæsthesia of the mucous membrane. If this sensitiveness was great enough, a normal or diminished amount of acid would cause pain. The treatment consisted in removing the primary cause, usually a neurasthenia from overwork or abuse of alcohol or tobacco; correcting errors in diet, anæmia, or chronic constipation which reacted upon the neurasthenia; neutralizing the acidity; the administration of sedatives, local and general, in the early stages, followed by *nux vomica*; making the diet nonirritating at first and later increasing it with due regard to the amount of acid secreted; relieving paroxysms of pain by lavage and in bad and obstinate cases by the rest treatment with rectal feeding.

The Surgical Aspects of Gastric Dyspepsia.—Dr. JOHN B. DEEVER presented a paper in which he said it had been rare in his experience for a patient to present lesions of the stomach without also presenting lesions of the duodenum, bile ducts, or pancreas, and he thought that the frequency with which such other lesions were associated with gastric disorders was not appreciated by the profession. He thought it but a fair statement to say that an indigestion had a cause, that if the indigestion resisted the action of diet and rational therapeutics, the cause must be organic, and that to remove an organic or mechanical cause mechanical means were required. Every patient, however, he did not think suitable for operation. One well advanced in years, who could be kept fairly comfortable with medicine, would probably be better under such treatment. The condition of a patient's other organs must be taken into consideration, but his plea was that the surgeon and not the physician should be asked to make the decision for or against an operation. The objects for which a surgeon operated in cases of gastric indigestion he classed as follows: Rest; drainage; prevention of cancer; removal of cancer; euthanasia. Rest was considered the main therapeutical indication in cases of gastric ulcer without pyloric stenosis or dilatation of the stomach. To secure this, nutrient enemata were considered valuable, but often overestimated, while he thought the patients who were forbidden food by the mouth suffered from depression of the recuperative powers. After reviewing the conditions and the statistics quoted by well known authorities Dr. Deever thought that the argument for surgical intervention in cases of gastric disease with the indication of rest for the stomach where medical means failed was founded on safe premises.

Drainage was indicated in practically every case of pyloric obstruction. He called attention to the reasonableness of a surgical operation for the relief of gastrectasis and other distortions of the stomach for which drainage was the proper treatment. In this category were included, besides simple gastric dilatation from pyloric stenosis due to ulcer, the various forms of hour glass constriction of the stomach and the distortions caused by adhesions, whether due to gastric ulcers or to biliary or pancreatic inflammation. He had never observed gastropexia unassociated with dilatation of the stomach, unless it was in those rare instances of splanchnoptosis in which all the abdominal viscera were prolapsed. When accompanied by gastrectasis, the latter condition was responsible for the symptoms; and some form of drainage was indicated. He would not hesitate to recommend surgical treatment in gastric atony. The mortality of operations for these conditions

was shown to be about five per cent.; that of medicinal treatment eighteen or twenty; and the permanent cures few and far between.

Under the third indication for operation Dr. Deever stated it had been well said that the time to operate to cure gastric carcinoma was while the disease was still in the stage of chronic nonmalignant ulceration. He thought there was no doubt in the minds of most pathologists that gastric cancer was most frequently developed from a preceding ulceration with chronic irritation of the ulcerating surface. If rebellious cases of chronic indigestion were promptly turned over to the surgeon and if suitable operations were done on such patients, it was his belief that there would be many fewer cases of carcinoma of the stomach observed by the physicians.

The problem of the surgical treatment of lesions already cancerous in nature was one worthy of the most careful thought. Here medicinal treatment was even more helpless. Although the outlook from surgery was by no means bright, he thought it more helpful. Statistics showed that not only was it possible to cure a few patients by radical operation, but that in the hands of some surgeons the duration of life was very much greater even in patients with recurrences. Gastroenterostomy was considered the treatment of choice in patients with advanced gastric carcinoma. And he would not limit it to cases where pyloric obstruction was present. Even if marked stagnation of food did not exist, he thought there could be no question that direct drainage of the stomach was beneficial and that by diverting the chyme from its course over the ulcerating area there was checked not only the pain from the growth, but the progress of the malady as well. If the disease had not extensively involved the stomach, but was sufficiently advanced to contraindicate removal of the growth, he employed the usual operation of posterior gastroenterostomy. If there was extensive involvement, sufficient to considerably debilitate the patient, and extensive adhesions, especially of the pancreas, he did simply an anterior gastroenterostomy with the Murphy button.

Finally, concerning the question of operation to induce euthanasia, in his mind there was no doubt that jejunostomy was frequently an imperative operation. Although it was but the substitution of one kind of death for another, he thought there were few patients and possibly fewer surgeons who would not prefer death to come from cachexia rather than from starvation. He thought that the profession in general did not appreciate the degree of alleviation of suffering which gastrotomy and jejunostomy afforded. In conclusion, he emphasized the fact that the problems of the proper treatment of gastric disease could only be worked out by the surgeon and physician together, and asked that the surgeon might be called earlier into consultation.

Some Symptoms in Childhood Suggestive of Congenital Syphilis.—Dr. ALFRED HAND, JR., read this paper, in which were presented a number of illustrative cases. He suggested the possibility of the germ transmitted through the fœtus having been so affected during its life in the parent as to be capable of doing little harm in the offspring.

Book Notices

Diseases of the Ear, Nose, and Pharynx. By D. B. ST. JOHN ROOSA, M. D., LL. D., Professor of Diseases of the Eye and Ear in the New York Post-Graduate Medical School and Hospital; BEAMAN DOUGLASS, M. D., Professor of Diseases of the Nose and Throat in the New York Post-Graduate Medical School and Hospital. New York: The Macmillan Company.

In presenting this volume, the aim of the authors has been primarily to assist practitioners and students in the treatment of diseases of the ear, but since affections of this organ are so commonly coincident with or secondary to nasopharyngeal disorder, the affections of these regions etiologically related to aural disease are fully considered. Furthermore, this intimate correlative dependence suggested the excellent idea of incorporating the discussion of these regions as one subject, an idea which has been skilfully and successfully developed. The attitude of the whole work is characteristically summed up in the following extract: "It seems to be supposed by some that peculiar means of treatment are at the service of specialists which are not in the hands of the average physician, and which can only be used when a disease has become well advanced. To those who hold such views, it may be said the time to treat aural disease is in the beginning of the attack. Aurists or surgeons have no means to combat inflammation other than those at the hands of every practitioner. To wait for so called special treatment is to lose important time. Besides this, there is no special, mysterious treatment that can be of avail at any time, no matter in whose hands."

The text throughout reflects the scholarly breadth of the authors and the book which they have jointly achieved can be conscientiously recommended as adequately fulfilling the purpose intended.

Miscellany

Dr. Emmet Cooper Dent.—The members of the Council of the American Medico-Psychological Association held a meeting at the Hotel Astor, New York city, on Tuesday, January 16, 1906, at which meeting they appointed, by formal resolution, a committee of three members of the association, consisting of Dr. William Austin Macy, Dr. George A. Smith, and Dr. Charles W. Pilgrim, to draw resolutions expressive of the loss of their late fellow member and the late secretary of the association, Dr. Emmet Cooper Dent. The special committee prepared the following resolutions:

Whereas, By the death of our late associate, fellow member and secretary, this association has been deprived of one of its most worthy members and progressive workers, and,

Whereas, We, his associates, have lost a dearly loved comrade whom we honored for his integrity, uprightness of character and sterling worth, whom we respected for his well known high standards in professional and in ordinary living, whom we admired for his unselfish devotion to all that made for a higher manhood, and for his steady and unflagging interest in the suffering humanity to which he ministered, and whom we all loved as an ever loyal friend and companion; therefore be it

Resolved, That we extend to the bereaved family our heartfelt sympathy in their grief and the assurance that his memory will ever remain cherished by us.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the week ended January 26, 1906:

Smallpox—United States.			
Place.	Date.	Cases.	Deaths.
California—San Francisco	Jan. 6-13	7	
Colorado—Teller County	Dec. 1-31	10	
Florida—Jacksonville	Jan. 13-20	5	
Florida—Alachua County	Jan. 13-20	1	
Florida—Columbia County	Jan. 13-20	4	
Florida—Hillsboro County	Jan. 13-20	12	
Florida—La Fayette County	Jan. 13-20	6	
Kentucky—Covington	Jan. 1-31	2	
Louisiana—New Orleans	Jan. 13-20	1	
Louisiana—Shreveport	Jan. 13-20	3	
Maryland—Baltimore	Jan. 13-20	1	
Missouri—St. Louis	Jan. 13-20	1	
Montana—Flathead County	Dec. 1-31	1	
Ohio—Cincinnati	Jan. 12-19	6	
Virginia—Norfolk	Jan. 15	5	
Washington—Bellingham	Dec. 1-31	8	
Washington—Cowlitz County	Dec. 1-31	7	
Washington—Spokane	Dec. 1-31	2	
Washington—Whitman County	Dec. 1-31	1	
Wisconsin—Appleton	Jan. 13-20	3	
Wisconsin—Milwaukee	Jan. 6-20	2	

Smallpox—Foreign.			
Africa—Cape Town	Dec. 2-9	2	
Brazil—Rio de Janeiro	Dec. 10-24	3	1
Canada—Toronto	Jan. 6-13	1	
Chile—Antofagasta	Oct. 1-31		51
Chile—Antofagasta	Nov. 1-30		27
China—Hongkong	Dec. 2-9	1	1
Ecuador—Guayaquil	Dec. 10-17		5
France—Paris	Dec. 31-Jan. 6	15	1
Gibraltar	Dec. 24-Jan. 7	12	1
India—Bombay	Dec. 19-26	6	
India—Karachi	Dec. 17-24	1	
Italy—Catania	Jan. 4-11		4
Mexico—Tuxpam	Jan. 9-16	20	1
Russia—Moscow	Nov. 11-13	10	3
Russia—Odessa	Jan. 16-20	25	3
Russia—St. Petersburg	Dec. 20-23	26	3
Spain—Barcelona	Dec. 21-31		13

Yellow Fever.			
Brazil—Rio de Janeiro	Dec. 10-24	9	9
Cuba—Havana	Jan. 10-22	2	2
Ecuador—Guayaquil	Dec. 10-17		6
Mexico—Orizaba	Jan. 7-13	1	1

Cholera—Local.			
Philippine Islands—Manila	Dec. 2-9	1	1

Cholera—Foreign.			
Russia—Government of Lanza	Dec. 18-21	5	

Plague.			
Brazil—Rio de Janeiro	Dec. 10-24	16	7
China—Hongkong	Dec. 2-9	3	3
India—Bombay	Dec. 19-26		9
India—Karachi	Dec. 17-24		13
Japan—Kobe	Nov. 8-Dec. 8	41	30
Japan—Osaka	Nov. 2-Dec. 8	66	51
Peru—Guadeloup	Nov. 20-Dec. 10		7
Peru—Lima	Nov. 20-Dec. 10		7
Peru—Trujillo	Nov. 20-Dec. 10		3

Public Health and Marine Hospital Service:

List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending January 24, 1906.

FOSTER, M. H., Passed Assistant Surgeon. Granted leave of absence for one month from January 23, 1906.

GREENE, J. B., Passed Assistant Surgeon. Granted leave of absence for two months and twelve days from January 13, 1906.

GUIERAS, G. M., Surgeon. Granted ten days' leave of absence from January 27, 1906.

KEATLEY, H. W., Acting Assistant Surgeon. Granted leave of absence for twenty days from January 20, 1906.

McKEON, F. H., Assistant Surgeon. Temporarily relieved at San Francisco Quarantine Station, and directed to proceed to Columbia River Quarantine Station for temporary duty.

RICHARDSON, T. F., Passed Assistant Surgeon. Granted three months' leave of absence from January 20, 1906, with permission to go beyond sea.

RICHARDSON, T. F., Passed Assistant Surgeon. Relieved from duty at Savannah, Ga.; effective January 31, 1906.

RICHARDSON, T. F., Passed Assistant Surgeon. Excused from duty without pay from April 30, 1906, to February 15, 1907, for the purpose of undertaking the sanitation of the North coast of the Republic of Honduras.

STEARNS, W. L., Pharmacist. Granted extension of leave of absence for seven days from January 20, 1906.

Resignation.

GREENE, J. B., Passed Assistant Surgeon. Resigned to take effect March 30, 1906.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 27, 1906:

ASHBURN, P. M., First Lieutenant and Assistant Surgeon. Appointed a member of a board of medical officers to meet in Manila, P. I., for the purpose of studying tropical diseases as they exist in the Philippine Islands. The board will be governed in its proceedings by such instructions as it may receive from the Surgeon General of the Army.

BISPHAM, WILLIAM N., First Lieutenant and Assistant Surgeon. Leave of absence extended thirty days.

CLAYTON, JERE B., Captain and Assistant Surgeon. Reported for temporary duty at the Military Prison, Fort Leavenworth, Kansas.

CRAIG, CHARLES F., First Lieutenant and Assistant Surgeon. Appointed a member of a board of medical officers to meet in Manila, P. I., for the purpose of studying tropical diseases as they exist in the Philippine Islands. The board will be governed in its proceedings by such instructions as it may receive from the Surgeon General of the Army.

FORD, CLYDE S., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Barrancas, Fla., and ordered to the medical supply depot, New York, N. Y., for duty.

DEVEREUX, J. R., First Lieutenant and Assistant Surgeon. Ordered to accompany 2nd Infantry from Fort Logan, Colo., to San Francisco, Cal. Upon completion of this duty to return to his proper station.

GANDY, CHARLES M., Major and Surgeon. Ordered to accompany Headquarters and 2nd Battalion, 1st Infantry, from Fort Wayne, Mich., to New York, N. Y., and upon completion of this duty to return to station.

HALLOCK, H. M., Major and Surgeon. Granted twenty-one days' sick leave of absence.

KELLER, WILLIAM L., First Lieutenant and Assistant Surgeon. Ordered to accompany 2nd Infantry from Fort Logan, Colo., to San Francisco, Cal. Upon completion of this duty to return to proper station.

MARROW, CHARLES E., First Lieutenant and Assistant Surgeon. Ordered to proceed from Fort Sheridan, Ill., to Fort Brady, Mich., to accompany 1st Battalion, 1st Infantry, from that post to New York City, and upon completion of this duty to return to station.

REILLY, JOHN J., First Lieutenant and Assistant Surgeon. Ordered to report to Major William H. Arthur, president of the examining board, Army Medical Museum Building, Washington, D. C., for examination to determine fitness for advancement.

ROCKHILL, EDWARD P., Captain and Assistant Surgeon. Advanced from grade of first lieutenant to captain.

SHOOK, JAY R., First Lieutenant and Assistant Surgeon. Ordered to report to Major William H. Arthur, president of examining board, Army Medical Museum Building, Washington, D. C., for examination to determine fitness for advancement.

SNYDER, HENRY D., Major and Surgeon. Ordered to Fort Reno, Oklahoma Territory, for the purpose of investigating and reporting upon administration of medical department at that post.

WILSON, COMPTON, First Lieutenant and Assistant Surgeon. Ordered to report to Major William H. Arthur, president of the examining board, Army Medical Museum, Washington, D. C., for examination to determine fitness for promotion.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending January 27, 1906:

BAKER, M. W., Passed Assistant Surgeon. Commissioned a passed assistant surgeon from July 10, 1905.

BELL, W. H., Surgeon. Commissioned a surgeon from May 20, 1905.

BRAISTED, W. C., Surgeon. Detached from the Bureau of Medicine and Surgery, Navy Department, on February 7th, and ordered to duty at the Naval Medical School, Washington, D. C., and to additional duty as a

member of the anatomical board of the District of Columbia.

BROWN, E. M., Passed Assistant Surgeon. Commissioned a passed assistant surgeon from May 8, 1905.

FIELD, J. G., Surgeon. Detached from the *Celtic* and ordered home to await orders.

HOLLOWAY, J. H., Passed Assistant Surgeon. Commissioned a passed assistant surgeon from September 26, 1905.

HULL, H. F., Assistant Surgeon. Detached from the Naval Hospital, New York, N. Y., and ordered to the *Celtic* for temporary duty, and thence to the naval station, Culebra, W. I., and to additional duty on the *Alliance*.

JONES, E. L., Assistant Surgeon. Appointed an assistant surgeon, with the rank of lieutenant, junior grade, from December 30, 1905. Ordered to the Naval Hospital, Mare Island, Cal.

LEYS, J. F., Surgeon. Detached from the Bureau of Medicine and Surgery, Navy Department, and ordered to the Naval Hospital, Norfolk, Va.

MCDONALD, W. N., Assistant Surgeon. Detached from the naval station, Culebra, W. I., and ordered to the *Maine* for temporary duty, and thence to the *Celtic*.

MURPHY, J. F., Passed Assistant Surgeon. Commissioned a passed assistant surgeon from May 18, 1905.

PAGE, J. E., Surgeon. Commissioned a surgeon from April 20, 1904.

PICKRELL, G., Surgeon. Detached from duty in charge of the Naval Hospital, San Juan, P. R., ordered home, and granted sick leave for three months.

SCHWERIN, L. H., Acting Assistant Surgeon. Appointed as acting assistant surgeon from January 28, 1906.

STOKES, C. F., Surgeon. Detached from duty at the Naval Medical School, Washington, D. C., and ordered to duty in command of the Naval Hospital, San Juan, P. R., sailing from New York, N. Y., about February 10th.

Births, Marriages, and Deaths.**Married.**

EWING—CROSS.—In Trudeau, N. Y., on Thursday, January 18th, Dr. George Justice Ewing, of Philadelphia, and Miss Mary E. Cross.

GILFILLAN—HAYES.—In Newark, N. J., on Tuesday, January 25th, Dr. W. Whitehead Gilfillan and Mrs. Mary Louise Hayes.

KAUFMAN—FOX.—In Philadelphia, on Wednesday, January 24th, Dr. A. Spencer Kaufman and Miss Florence Fox.

MEYER—DINSMORE.—In Minneapolis, on Thursday, January 18th, Dr. E. Lawrence Meyer and Miss Margaret Emerson Dinsmore.

ROBERTS—REYNOLDS.—In Philadelphia, on Tuesday, January 23d, Dr. J. V. C. Roberts and Mrs. Grace Fenimore Reynolds.

SEVIER—SCATENA.—In San Francisco, on Wednesday, January 17th, Dr. Lawrence Riland Sevier and Miss Florence Scatena.

WHITE—PECK.—In Providence, R. I., on Wednesday, January 24th, Dr. Albert C. White and Miss Louise Lyman Peck.

Died.

ABELL.—In Philadelphia, on Monday, January 22nd, Dr. Amacey B. Abell, aged sixty-three years.

CARTER.—In Mount Vernon, N. Y., on Tuesday, January 23rd, Dr. Theophilus Carter, aged forty years.

ELDRIDGE.—In New York, on Wednesday, January 24th, Dr. Rolfe Eldridge.

HEATH.—In New York, on Wednesday, January 17th, Dr. Richard Armstrong Heath, aged forty-three years.

HILLHOUSE.—In New Haven, Connecticut, on Sunday, January 21st, Dr. William Hillhouse, aged eighty-six years.

HODGES.—In Ellicott City, Maryland, on Tuesday, January 16th, Dr. William E. Hodges, aged seventy years.

POE.—In Baltimore, on Saturday, January 20th, Dr. William Clemm Poe, aged sixty-two years.

WATSON.—In Independence, Missouri, on Tuesday, January 16th, Dr. Thomas J. Watson, aged eighty years.

New York Medical Journal

INCORPORATING THE

Philadelphia Medical Journal and The Medical News

A Weekly Review of Medicine

VOL. LXXXIII, No. 6.

NEW YORK, FEBRUARY 10, 1906.

WHOLE No. 1419.

Original Communications.

A CASE OF CEREBROSPINAL MENINGITIS INDICATING THAT IT MAY BE OF A CONTAGIOUS NATURE.

By H. A. HARE, M. D.,

PHILADELPHIA,

PROFESSOR OF THERAPEUTICS IN THE JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA.

On Thursday evening, March 9th, I was called to see a case of a young man of about 23 years, a mechanical engineer by occupation, by Dr. A. B. Craig, who stated that the patient had sent for him about six hours previously with the statement that he was suffering from violent pains in the head. Within an hour or two he developed opisthotonos, great rigidity of the cervical muscles, became so violent that it was difficult to control him, and his cries could be heard for a long distance. Dr. Craig immediately gave him 12,000 units of diphtheria antitoxine following the advice of Dr. Wolff, of Hartford. When I saw him, about 9 o'clock in the evening of that day, he was absolutely unconscious, exceedingly restless but not as violent as he had been a few hours before. In addition to the antitoxine he had received several large doses of morphine hypodermically. During the next 24 hours the condition of persistent restlessness continued, but the spasms ceased. I saw him a second time with Dr. Craig on Friday evening because his condition was not considered as good as it had been during the day. His temperature was 104° F. in the axilla, his pulse was 120, and it was with great difficulty he was kept in bed, but muscular rigidity in all its forms had largely disappeared. The face was very much flushed and the skin of the hands and chest hyperæmic and livid, there being a condition of capillary paralysis. The pulse was 140. Notwithstanding the continuous administration of diphtheria antitoxine so that in less than 36 hours he received over 25,000 units, the patient died of circulatory and respiratory failure, early Saturday morning, about 44 hours after the beginning of his illness.

On the Monday morning following, Dr. Craig telephoned asking me to see him on the ground that he was feeling badly. I saw him at noon, and found him with slightly injected conjunctivæ

and suffering from a condition of discomfort in his back and legs which did not, however, amount to pain. No rigidity was present in any part of the body. His mind was perfectly clear, but the patient was convinced that he was about to be seriously ill, and somewhat worried lest his illness should prove to be cerebrospinal meningitis. His pulse was 120; his temperature 102.5° F. The pupils were slightly contracted. Otherwise, there were no symptoms worthy of note. He vomited in the late afternoon, and I was sent for again at 7 o'clock, the patient being perfectly clear in his mind at that time. When I reached the house at 8 o'clock, the patient was completely unconscious and in the midst of violent convulsions accompanied by attempts to vomit which were prevented by the tightly clenched jaws. The Kernig sign was now present, the hands were clenched with the thumbs turned in at the palms, the head was rotated sharply to the right, and there was also a conjugate deviation of the eyes to the right, with fixation of the eye balls. All the facial muscles were in tonic spasm. Although the patient's axillary temperature was 104.5° F., the pulse rate was 88, the individual beats being very feeble. He died at 3 a. m. Tuesday morning, about eight hours after the development of distinct meningeal symptoms, and nineteen hours after his first symptoms developed.

These two cases of fulminating cerebrospinal meningitis are not only interesting because of their violence, but also because it would seem that the infection was transferred most probably directly from the first case to the second, Dr. Craig falling a victim, as so many others have done before him, to the faithful professional attendance which he rendered his patient.

Another point of great interest is that the first patient had visited Hartford and New London, Conn., a zone at that time infected by cerebrospinal meningitis, four days before his illness commenced. Still another point of interest is that a medical student who helped take care of the patient developed a violent tonsillitis with fever and pain throughout the body. The writer of this article also suffered from a chill, fever of 102°, and severe aching in the neck, back, and limbs four days after seeing the first patient, and within twelve hours of seeing the second one. In my own case I used 4,000 units of diphtheria antitoxine as a prophylactic, knowing that it probably could not do harm, and that as this serum

had been said to do good in certain well developed cases, it occurred to me that it might act as a preventive.

As many writers upon cerebrospinal meningitis regard it as infectious, but not capable of being transmitted from man to man, this clinical report is of some interest.

1801 SPRUCE STREET.

IF EDUCATION UPON SEXUAL MATTERS IS TO BE OFFERED TO YOUTH, WHAT SHOULD BE ITS NATURE AND SCOPE, AND AT WHAT AGE SHOULD IT COMMENCE?*

By E. L. KEYES, M. D.,

NEW YORK.

To presume to teach is to assume to know. In accepting the invitation to join this educational symposium, I am not justified. I am not an instructor of youth and I do not assume to know. Moreover, the task along the proposed line is of an unusual delicacy.

To attempt it seems to me like trying to map out a prospective voyage upon an uncharted sea, a sea of which we have no reliable chart. We know some of its reefs, its shallow bars, its frightful whirlpools; but we have no weather prophet to predict exactly where or when we may expect to encounter upon it the uncontrollable cyclones of passion and endless storms of prejudice. It is a fearful task and one fraught with such responsibility that I approach it with a feeling of hopelessness and helplessness akin to shame. I am no experienced pilot upon these waters nor are you trained mariners. I blush and apologize for appearing before you. I feel that it is another instance of the blind leading the blind. That I am blind by reason of inexperience there can be no question, and that you are blind and that the entire community is the same I honestly believe while apologizing for telling you so. How, then, can I talk to you about the voyage with any hope of ever reaching port?

Generalities in the way of such suggestions as strike me I may lay before you and such plausible directions as my point of view may furnish, but that is all; for it seems to me that the whole subject is experimental.

And yet this is no reason why I or any of us should shrink from the effort, since the task is in the nature of things and due to the times in which we live. It is hardly proper to call it self-imposed. It has evolved itself out of the condition of general enlightenment of the community, assisted, if you will, by the efforts of Dr. Morrow, and under the inspiration of the same movement in Europe. But none the less it is the product of the times; and as the tendency cannot be resisted we must try to direct it rather than to let it drift.

A thirst for knowledge and a tendency to investigate permeates the intelligent atmosphere of the community. Our children know much more than we did as children. They reach out for further knowledge and they imagine that they know more than they actually do know. Also they are

being pushed in breadth in all educational directions, and tradition and authority are empty names along any lines where exactness in demonstration can be brought to bear.

This is a subversion of the older methods. Whether it is better or not has not yet been proved. The authority of the elder is passing away along with unquestioning faith based upon authority. Fairy tales and the delusions of imaginative youth are being relegated to the ash heap of superstition. The delightful halo of shuddering affection that formerly glowed around the kindly form of Santa Claus has been removed, and the dreary platitude of the every day, conventional parent has been placed in the exalted niche that the cheery, rubicund saint once occupied.

Yet we may well pause and ask ourselves: Is it just, is it wise, thus to disenthroned a kindly, innocent saint? The child must have some channel in which to let loose the imagination, as was demonstrated to me clearly by a young lady in speaking of this same Santa Claus myth. When she was well along in childhood, a boy companion of the same age attempted to disabuse her mind as to the existence of Santa Claus. She did not wish to believe his statements and pondered long and seriously to discover a means of escape from her dilemma. She finally found a solution that satisfied her mind and rendered her happy for many years. It was this: Santa Claus was a Christian saint and she a pious maiden. The boy had no particular religious convictions; therefore, plainly, the saint, in natural retaliation, would not bestow his favors upon the boy, and he, forsooth, was obliged to invent his tale and substitute his father in order to receive Christmas presents like other children. How paltry is all our philosophy in view of such a mental attitude!

Read Kenneth Grahame's *Golden Age*, a mellow exhibit of the child's view of life, the world, and things in it; and then imagine the effect of the exposition of the sexual problem before an audience such as he depicts.

And this same imaginative spirit exists through life. It belongs to youth, but it is not lost in manhood or old age. It is not really modified very much by instruction, yet it makes use of knowledge, not as an actuality but according to its own emotional standard. Take it away and life becomes one dreary routine of hard mathematical facts out of which an escape into the cold oblivion of a sheltering grave would become a welcome alternative.

And now, with Santa Claus, the other childish myth is being shuffled off. The stork is being deprived of one of his blessed functions; the cabbage patch has become unnecessary, and the basket of the kindly doctor will soon be no longer needed to account for the advent of the new baby. Alas for the golden days!

Perhaps it is better so, I know not; but it is less lovely, and life will be less worth living when all the transformation shall have been accomplished. But, as I said before, this condition of things is in the air and we must face it and make the best of it. Knowledge comes to children and to our youth, and that it should be accurate and not distorted knowledge is most desirable.

* Read before the American Society of Sanitary and Moral Prophylaxis, October 12, 1905.

How, then, to make the approach? Every child, sooner or later, gets sexual knowledge; but he picks it up here and there in a haphazard way, and it is always at first more or less distorted and inaccurate. The boy is father to the man. The imagination is always young, always active.

Granting these points (and I believe them to be self evident), it becomes only reasonable to conclude that it will be better for the child to substitute a healthy education upon sexual matters for the unhealthy one he naturally gets in his own way, but how shall this be done?

The natural method of teaching all moral and social subjects is through the parents in the home. Here the child learns kindred things without books and without other teacher. He learns what honor is; he learns the conventionalities of life and its etiquette under various conditions; he learns to respect his home, the family name, and to defend the persons of his brothers and sisters, by actual force when required. He grows up insensibly along all these lines, and he is instructed as to his eating. He is not told about the intricacies of digestion, but is warned that if he gorges himself harm will come of it and that certain rich articles of food are worse than others.

All this knowledge and all needed points about the care of his person he learns naturally and easily at home; and here and in the same manner he should imbibe his knowledge of sexual matters. But, unhappily, here the line is drawn. The little angel is considered too pure to have his mind sullied by mention of such vicious subjects; and therefore he is deceived and goes on in ignorance until a chance companion enlightens him partially; and the imagination does the rest.

Some shyness on the part of the parents is quite natural; but it seems to me that this is the true point of attack. Parents must be taught how to impart information, and this teaching of the parent should begin when he, the parent, is himself a child. In other words, the teaching of children now will bear fruit upon their grandchildren.

Therefore, I advocate a diffusion of the idea that the young child, all the way from seven to twelve, before the age of puberty, before the sexual idea in its emotional garb has entered the imagination, be educated at home, in a kindergarten way, to a general knowledge of the idea that all life, of plant, of animal, of fish, of bird, comes from a previous life, and that, as a rule, it requires two previous lives before there can be any new life; that one of these lives is a male life supplying something and the other a female life supplying the rest: and this can be objectively illustrated through flowers, and trees; and the instrumentality of insects and fertilizing the blossom and thus producing seed and fruit can easily be brought into a child's comprehension without shock or shame. Then, naturally, as the child grows older, he can be carried from the idea of the fertilizing of flowers by insects to the fertilizing of these same insects by each other, and so on through biological and zoological channels until the growing child comes to look upon sex as being as natural to a plant as to an animal, and after that further instruction will be easy, and may be extended to any desired limit.

But I definitely believe that all instruction to young people, while yet in school or college, should be individual. I believe that any printed matter will do harm and do not think that the latter should ever be introduced into schools or placed in the hands of any individual until he shall have started his career in life and finally left school, that is, the general academic school or college.

I believe that printed matter, even for older boys, would find its way downwards into the hands of the younger to their great detriment. After the young man or woman has become an item in the community by engaging in the business of life or the preparatory studies leading up to it, then such youth may listen to lectures upon sexual matters with probable advantage and be supplied with literature, but not before.

I am not an instructor, and this is only my point of view, but I believe in what I have said, honestly. It is simply this:

Good education is better than bad. The bad is sure to be acquired, therefore let us attempt to substitute the good. If the education once starts in a wrong way it cannot be easily corrected, therefore, begin early, long before puberty, that the mind may become accustomed to the idea of sex in plant as well as animal, long before the imagination is capable of becoming prurient, by reason of the fact that the sexual sense has not yet developed. The extent to which this education may be pushed must vary according to circumstances.

This instruction, if it does nothing more, will take away from the community one of the excuses with which the individual is wont to soothe his egotism in trying to escape from those tangles into which he may have come along sexual lines. These excuses are two, weakness and ignorance.

Practically always when a boy or man comes to a physician for the first time on account of venereal disease or analogous cause, to confess that he is in trouble because of sexual excess, irregularity, or from disease acquired through intercourse, practically always, I say, such a patient excuses himself. It is either the old, old story, "the woman tempted me and I did eat," in which the culprit acknowledges his weakness and against which education is impotent; or it is more commonly the statement: "I got into this trouble because I knew no better; nobody told me the danger, etc."

The latter scapegoat will be destroyed outright by education, and the sufferer from sexual troubles will have to shield himself on the plea of weakness, or take his punishment, honestly recognizing his culpability and saying nothing.

The sexual passion is a burning flame. It dominates a certain portion of nearly every man's life in a manner well nigh uncontrollable. It is a seething volcano without metes or bounds, yet it is kindled by the imagination, and the imagination is fed by knowledge. If that knowledge can be made less crude and more digestible, good must surely come of it; and it is in this effort that we are now engaged.

Yet, let us beware and move with circumspection; for it seems to me that the whole subject is a powder magazine and the instructor is smoking a pipe.

109 EAST THIRTY-FOURTH STREET.

EDUCATION IN SEXUAL SUBJECTS.*

By FERDINAND C. VALENTINE, M. D.,

NEW YORK.

For many centuries problems connected with the sexual function have been studied by learned men. At the present day the study is continued with an increasing understanding. General appreciation of its importance to the State, the family, and the individual has in no small degree been furthered by the labors of certain members of this society. Their names would go down to posterity for this part of their work alone, even if deprived of their other disinterested efforts for the good of humanity.

Sexual subjects, as such, are unattractive to the physician. Their discussion adds nothing to his reputation and is in no wise of benefit to him. It involves allusion to unpalatable truths, thus exposing him to unpleasant criticism and unhealthy wit on the part of those who cannot grasp the fact that purely scientific considerations actuate him.

Nevertheless, an exalted altruism that is above any criticism or jest spurs on the investigations of such men as Morrow, Sturgis and Keyes, among many others equally blind to self-interest. Stimulated by these examples, I crave the privilege of offering some thoughts on this important subject, within the lines laid down by the questions proposed for this evening's consideration.

1. *Should the youth of this country be educated in a knowledge of sexual physiology and hygiene?* For a full consideration of this first proposition it seems necessary to separate the sexes, even in the discussion. In girls the early awakening of the sexual desire is so exceptional, that they hardly come within any general study. It may be offered that the sexual appetite in the majority of American females is evoked only by the purest love. In many the appetite never asserts itself and, indeed, the only impulse thereto is in the desire to gratify the object of affection. It is our belief, therefore, that education in sexual matters would only most exceptionally be of value to a girl. It might even, in one who without such instruction would never have a sexual thought, evoke a pseudodesire prompted by sheer curiosity. So, too, information might mislead the exceptional girl in whom the sexual impulse awakens early in life, into falling a ready victim to the first seducer. On the other hand, misinformation imparted by heedless servants and others offers an equal, if not a greater, danger.

With boys the matter is entirely different. They everywhere are confronted by sexual questions. From conversation with their companions to the blatant advertisements of quacks, even in the public urinals, everything tends to attract attention to the sexual act. Therefore, even the most pure minded boy cannot escape early fruit from the tree of knowledge. This makes him aware of the genic function, between whose use and abuse he cannot distinguish. It is evident that he urgently requires education in sexual physiology and hygiene. How he is to receive this may be better considered in the further divisions of this evening's discussion.

2. *What should be the nature and scope of this education?* If this question applies strictly to in-

formation exclusively on the physiology and hygiene of the sexual relation, such education would necessarily be brief and ineffective. If, however, the underlying purpose be to embrace in teaching the results of violations of physiological and hygienic laws, then such education would inevitably be extensive and useful. It should encompass the evils of masturbation, the disastrous effects of venereal infection both upon the mind and body; it should also cover the effects of venereal diseases upon the individual, the family, and the State.

The nature and scope of this education must of necessity be regulated according to each pupil's receptivity and ability properly to comprehend what is taught. Manly boys at 15 are perfectly competent to receive and be fittingly impressed by such instruction. Puerile men of 20 or more, are unable to grasp any but lascivious ideas from anything of a sexual nature conveyed to them. Such adult children are not rare. Every venerologist has met psychopaths to whom each curve in nature or art suggests the female breasts, nates, or genitalia. For such not even the slightest education in sexual subjects would be advisable. Indeed, it would be harmful, because every step thereof would to them contain lubricious suggestions. The nature and scope of education in sexual physiology and hygiene then must be predicated upon individualization.

3. *At what age should this instruction be given and should it be progressive according to the age of the individual?* The ripest time for instruction is the age of puberty. Mental and physical puberty arrive, however, at very different ages in different individuals; moreover, they are not always coincident even in the same individual. Some boys, sexually most precocious, are mentally far behind others of their age and vice versa. The years that a boy has acquired are consequently no certain guide to the proper time for sexual instruction.

Boys of 12 years or less with venereal diseases resulting from sexual profligacy, are not rare. Male sexual continents of 30 or more years have ceased to evoke astonishment, for the day has passed when fathers sent their sons to houses of prostitution to "sow their wild oats."

The only right age for sexual instruction is the age at which it will individually best serve for prophylactic purposes. Consequently the instruction to be effective must be complete and not progressive. It should emphasize the perils of illicit coitus, moral and physical, without which, especially the latter, the instruction would be likely to have very little deterrent effect.

4. *Through what agencies should this instruction be given; through parents, physicians, or teachers?* Should our educational centres, high schools, colleges, and universities be utilized for this purpose? At first glance, this question seems to premise equal capacity on the part of those who teach, and equal receptivity on the part of those who learn. Nothing is farther from the truth.

The importance of this portion of the discussion demands its consideration with as much detail as is permissible in the time allowed for the discussion.

In another effort¹ the unfortunate fact was offered that many parents, no matter how devoted to

* Part of a discussion before the American Society of Sanitary and Moral Prophylaxis, October 12, 1905.

¹ The Boy's Venereal Peril. *Journal of the American Medical Association*, July 4, 1903.

their sons, no matter how well informed on the subject now under consideration, are psychically too far removed from their children to be able to effectively impart the needed precautionary instruction and incident advice. When, however, the father has been wise enough to establish such relations in his family that his son regards him as more than a provider and castigator, then, beyond cavil, the father is the best one to give the needed instruction. But, in the hurry and turmoil to provide for his family, the father, even when he has the intellectual equipment, frequently loses sight of moral and prophylactic needs.

I know of two instances in which mothers performed the delicate task of instructing their boys. One was a widow, the other the wife of a drunkard and debauchee. The sons of both these women remained sexually continent until they married. These exceptional instances are not cited as an argument that sexual instruction devolves naturally upon the mother. They show merely that in isolated circumstances this delicate task has been performed successfully.

When the ideal family relation exists, the father is, in the nature of things, the best one to forewarn and therefore forearm his son. Where it does not exist, the father's attempt at instruction can be but harmful.

Not unlike the foregoing are the arguments to be advanced for or against instruction by the teacher. If it is to come from him he must possess the qualifications that will enable him to select the psychological moment at which such instruction will be beneficial. Unless endowed with special sympathy the teacher's, like the father's, best meant instruction will be unavailing, if not worse than useless.

In a somewhat better position to teach sexual physiology and hygiene is the physician. But successful instruction, even by him, is based upon his individuality, his ability to simplify his language to the understanding of his pupil, his adroitness in showing the dangers of violation of physiological and hygienic laws, and his skill in avoiding the hysterical in his warnings.

The question whether our educational centres should be utilized for instruction in sexual subjects, partakes of an almost identical character with the preceding considerations. One striking advantage is, of course, at once apparent. In schools where individualization is applied to character building, where the teacher is wise enough to be emancipated from a habit of generalization, boys can be divided into groups of approximately equal mentality and development, and the opportune moment selected for the necessary instruction. For general class teaching, however, sexual subjects are not only highly improper, but positively dangerous.

5. *Should the teaching of sexual physiology be incorporated in our textbooks of elementary hygiene?* It must be considered that schoolbooks are not necessarily closed volumes to the younger children of a household, and information that would be beneficial to one may harmfully reach others who are not ripe therefor. Then, again, classes in which elementary hygiene is properly a subject of instruction from all other points of view than the present should not be put off to another term or

more because some youths may, from chapters on sexual physiology and hygiene, derive information that will prove injurious rather than advantageous. Such chapters, given lascivious interpretation by perhaps the majority of boys, may serve as stimuli to the sexual desire. The danger of this desire, once stimulated, becoming that "nagging" impulse, so well described by Keyes² before the April meeting, is too great to be disregarded. Those individuals whose mental development fits them for the study certainly can be benefited by instruction in sexual physiology. This instruction can well be supplied by chapters thereon printed separately from the schoolbooks. The instructor would then be able to give copies to such pupils as would be benefited and not depraved thereby.

To summarize these thoughts, crudely expressed, I would submit:

1. Sexual physiology and hygiene need not be formally taught girls, save in the exceptional instances in which the genesic impulse is prematurely developed.

2. Sexual physiology and hygiene should be taught every boy, when mental and sexual puberty make him capable of beneficially utilizing the knowledge.

3. The nature and scope of instruction on sexual subjects should be regulated according to each pupil's ability properly to appreciate the warnings inseparable therefrom.

4. The age at which a person may safely be instructed in sexual subjects is that age at which, in each individual case, such instruction becomes necessary for the purposes of moral and physical prophylaxis.

5. The individuality of the parent, physician or teacher should be the guide to the choice of one or the other as the exponent of the facts.

6. Educational institutions may be utilized for instruction in sexual subjects, but such instruction must be given to small groups of pupils selected because of their mental parity as nearly as may be.

7. Textbooks on elementary hygiene should not contain chapters on sexual physiology. Those charged with imparting instruction on sexual subjects should be provided with separately printed chapters on the physiology and hygiene of these matters. These separately printed chapters could then be given with the greatest discretion to such pupils only whose mental development would preclude their misusing the information derived therefrom.

8. All instruction to the laity on sexual subjects should be directed essentially to serve as a groundwork for the following ideas:

a. Many learned men hold that ante-nuptial coitus is not necessary for the health of the individual.

b. Continence reduces the sexual desire.

c. Gratification of the sexual impulse before marriage degrades the moral tone and exposes to serious infection.

d. Venereal diseases are not disgraceful infections, but the result of unfortunate lack of self-control.

² E. L. Keyes, *The Sexual Question*. Presented before the American Society of Sanitary and Moral Prophylaxis at the April, 1905, meeting.

e. The greatest danger at the inception of venereal diseases is in their being maltreated by quacks.

f. If a person is so unfortunate as to contract a venereal disease, self-preservation should cause him to immediately seek the advice of his family physician.

171 WEST SEVENTY-FIRST STREET.

THE DIETETIC TREATMENT OF CHRONIC DIARRHŒAS.*

By MAX EINHORN, M. D.,
NEW YORK,

PROFESSOR OF MEDICINE AT THE NEW YORK POSTGRADUATE MEDICAL SCHOOL.

I have selected the dietetic treatment of chronic diarrhœa because this subject of diet is an important one in all diseases, and particularly so in affections of the digestive tract, as there we have to deal with an apparatus which is arranged to sustain the organism.

In order to discuss this subject of dietetic management of chronic diarrhœa, it would be well to divide its forms into different classes. 1, Diarrhœa due to chronic intestinal obstruction; 2, nervous diarrhœa; and 3, chronic diarrhœa, due to catarrh of the small intestine principally, sometimes also accompanied by a catarrhal condition of the colon. Most forms of chronic diarrhœa principally involve the small intestine; and this group can again be subdivided into 1, primary catarrh; 2, catarrh depending upon abnormalities of gastric secretion; and 3, catarrh accompanying ulceration.

In the treatment of all these types of diarrhœa it is primarily important that we should make use of those foods which are nonirritating and which leave little residue. They must not irritate the bowel mechanically nor chemically, nor must they be very cold when ingested.

The special treatment of each class will call for a difference in the dietetic regime. In chronic intestinal obstruction, so long as the patient is not operated on and the obstruction exists, the first principle will be that the diet should be a liquid one. This liquid diet will have to be maintained because solid food will not pass through the narrowed canal. It will be vomited and will aggravate the symptoms. We may give milk, raw eggs, and different kinds of broths and meat juices, but this will be all which we may allow. Variations to improve the taste, and bring more variety into the menu may be introduced, but in the main the foods will remain the same.

A reverse course must be adopted in that form of diarrhœa which is of nervous origin. In this disorder, as far as we know, there is really no anatomical lesion to be found. It is simply a functional disease, and the chief feature of this type of diarrhœa is that nervous phenomena accompany it and also bring it on. This means that in addition to a diarrhœa the patient also manifests other nervous symptoms. He perhaps cannot sleep well, his appetite is capricious, and then the diarrhœa itself also manifests a character which shows its nervous origin. The patient will have a movement of the bowels principally after meals, or when he will have to meet a very important engagement; a professor

before giving a lecture will have to excuse himself and leave the room, indicating that the state of mind has something to do with the movement of the bowels.

In these cases the whole management should be different from those which are due to anatomical lesions in the intestines. The diet, too, must therefore be arranged accordingly. It will not have to be such a rigorous one. We will have to make the patient eat almost everything. Even those foods which leave a residue do not play much part. I remember I had to treat a physician in this city who had this kind of a diarrhœa. He had to excuse himself after finishing each meal. The main treatment is that the patient should try and suppress these movements, i. e., not to run to the closet as often as he feels inclined, and besides other means, nerve sedatives. The diet should not be restricted, food of a laxative nature, however, should be avoided; otherwise these patients can eat everything.

Now we come to that class of diarrhœa which is due to disturbances of the stomach. This is a group which has been recognized only in the last ten years. We have learned to know that there are forms of diarrhœa in which the small and large intestines are not very much involved, but in which we find abnormal conditions in the stomach itself, and if we try to arrange a treatment suitable to the derangement of the stomach, the diarrhœa as such can be neglected and still will be cured.

There are two lesions in the stomach, functional disturbances, which form the greater part of this class of diarrhœas. One is the form which is called achylia gastrica, in which there is no gastric juice whereby the stomach does not digest albuminoid foods. Here the food enters the intestine practically unchanged, and thus irritates the bowel, causing the diarrhœa, at least in some cases. Achylia gastrica is not always accompanied by diarrhœa. I think, on the contrary, that more than one half of the cases are accompanied with extreme constipation, but about one third of these cases of achylia gastrica are troubled with obstinate diarrhœa, and this diarrhœa is probably due to mechanical irritation within the small intestine.

Diarrhœa may also be brought on by just the reverse condition, i. e., one in which there is too much secretion and too much acidity in the stomach. Here it is not the mechanical irritation but most likely the acid itself which exerts an irritating stimulus on the intestinal mucosa, which leads to the diarrhœa. This class, however, is a small one. Most patients who suffer from hyperchlorhydria suffer from constipation, and only a small fraction suffer from diarrhœa, but we must remember that such a group exists, as sometimes they may be cured by alkalies.

In these two groups, in which the diarrhœa is dependent upon a gastric anomaly, the entire treatment, medicinal and dietetic, will have to be arranged to suit the stomach. In the patients with achylia gastrica we find it expedient empirically, not merely theoretically, to exclude proteids from the diet. Such patients do much better on a diet which contains little meat or no meat at all. They should live on a vegetarian diet. A vegetable diet is inclined, as a rule, to predispose to diarrhœa, but in this group of cases it is just the remedy. If one keeps a patient on gruels and perhaps on nicely di-

* Read before the Brooklyn Pathological Society, December 14, 1905.

vided articles of food, milk, kumiss, later on bread and butter and omits meat entirely for a time, we will find that in a few weeks he will not suffer so much from the diarrhœa. I think this to be the experience of almost all the physicians who handle these cases. According to my experience, however, it is not necessary to institute a rigorous diet nor to avoid meats altogether for a very long period. If we give the patient finely divided foods for a few weeks, at first liquid, then semi-liquid foods, we can then after a time begin to allow foods a little coarser, bread, vermicelli, barley, rice, and later on meat. We will find that the bowels will gradually get accustomed to these foods, even if they do not get into the intestine in so finely divided a state. These patients should masticate their food carefully. This is more important here than in any other class of stomach derangements. These patients do well on starchy foods.

Diarrhœa, if due to a condition of hyperchlorhydria, will have to be managed quite differently. Here meats, a richly albuminous diet, will play an important part. These patients will do well on plenty of meat and eggs, and very little starchy food—just the opposite of those suffering from achylia—and also an alkali.

In the first group, achylia gastrica, it is not essential to administer hydrochloric acid, but in the second group, hyperchlorhydria, we will have to give alkalies.

We shall proceed now to the larger group of chronic diarrhœa, due to abnormal conditions in the small intestine. This is the more difficult group to handle outside of the group due to intestinal obstruction (which we can only cure by an operation; otherwise we have to keep to liquid diet). This group in which there is a chronic catarrh of the small intestine, comprises perhaps more than half the cases suffering from diarrhœa. Here diet plays a very important part, and we will have to discuss a little more minutely how to handle them and what we should do.

There is no unanimity of opinion among physicians nowadays as to the kind of diet to be given to such patients. Some say that these patients will do well on an exclusively meat diet; others again will say that patients get well on an exclusive milk diet. Others again say that milk is the worst thing. Among the latter is Professor Rosenheim, who recently wrote an article on this group of diarrhœas. He says that he always failed with milk in such cases, because the milk sugar easily breaks down into lactic acid, which upsets the patient. He therefore excludes milk from the diet of these patients. He even goes so far as saying that the admixture of milk to cacao or to soup, and a little cream will also upset the patient.

So far as I am concerned I must say that I am not so much afraid of milk and I am rather of the opinion that while we should exclude all fruits, salads, highly spiced dishes, all irritating substances and cold beverages (all things which have a tendency to increase peristalsis should be carefully avoided), we should still try to give a sufficient quantity of nourishment to these patients even if their actual condition of diarrhœa should apparently grow worse through the diet. I am of the opinion that if we are timid and give these patients very

little food, they will notwithstanding the improvement of their diarrhœa, perhaps having only two or three movements a day, soon suffer in their nutrition and the body weight will decrease. The great danger is that if such a condition of subnutrition is kept up, after a while we cannot cure such patients at all. This is the case with a great many of these patients.

In reality it is advisable to give rest to an organ which is diseased and it will then recuperate and do well later on and do more work. You may, in severe cases of diarrhœa, try such treatment. We may give the patient very little nourishment, perhaps egg albumen water, but if so one should always bear in mind not to restrict the patient to this diet more than a week or ten days. After this period we must reestablish the amount of nourishment, and put the patient on a regime which will build him up. It is important to consider that even though the patient feels improved and the chronic diarrhœa gets better on the restricted diet, he may be getting too little nutrition and a state of inanition results. The organs are weakened and the disease instead of growing better becomes aggravated. In this weakened state the organism is not able to recuperate. For this reason I say that in these cases of chronic diarrhœas, after having tried a very short period of time with little nutrition or no nutrition at all, we must give them plenty of food, plenty of eggs—eggs are indeed very good in these cases—six or eight eggs a day I generally give. We give them plenty of gruels and barley. You may try decoctions of barley, oatmeal and rice, and later on give them porridges, and then bread and butter, and then meats. I do not exclude meats. I do not give them any fruits, salads or any cold drinks or anything of an irritating nature. Nourish them well.

What will you do if the diarrhœa is kept up? How will you manage that? Here certainly we must take recourse to some medicinal treatment. We may give them a tannic acid preparation; we may administer an opiate. It is much better to make the patients eat and keep them on some remedy, so that they are able to keep up with feeding and check the diarrhœa a little, than not to allow them to eat and not to take medicine.

I have found by experience that a great many patients soon begin to gain in weight, in fact in most of these cases you can achieve a gain in weight if you give them sufficient nourishment, more than enough to keep the body in balance. They will add flesh too, and as soon as they are stronger they are able to fight the disease and do not require so much medicine. I have seen such cases. I particularly remember a patient who lost fifty to sixty pounds from chronic diarrhœa. She did not eat anything that was forbidden her, and she thought that milk increased the diarrhœa, also bread, and she did not wish to eat. Ultimately she took nothing. Her condition was so bad that she was almost a skeleton, but after I allowed her to eat and gave her in addition some slight remedy, after a few weeks she picked up and in two or three months recovered.

It is thus with a great many other patients, and I think it is very essential to bear in mind how important a part nutrition plays in prolonging life and curing disease.

20 EAST SIXTY-THIRD STREET.

SURGERY OF THE THYROID GLAND.*

BY MAX BALLIN, M. D.,

DETROIT, MICH.

Under the head of surgical diseases of the thyroid the injuries of the gland and the malformations should be considered first. The former have no special pathological interest; consideration of the latter, which includes also the question of accessory thyroid and parathyroid, is a very interesting chapter but would lead too far into embryological and histological discussions, so that I will confine my remarks this evening to the inflammation and different new formations of the thyroid gland.

THYROIDITIS.

In most of the cases observed the inflammation of the thyroid gland is secondary to an infectious disease. Cases of thyroiditis are recorded during or after typhoid fever, cholera, smallpox, diphtheria, measles, influenza, articular rheumatism, parotiditis, puerperal fever, etc. Besides this secondary form of thyroiditis, a primary form is known in which the thyroid is clinically the first and only diseased organ, where clinically, at least, the affection is confined to the thyroid alone. Pathologically both forms are practically identical, as also in the seemingly primary form infection by the blood current ensues from diseased tonsils or slight intestinal disease. Kocher could prove that at least in preexisting goitre inflammatory processes are usually caused by intestinal microorganisms.

Symptoms.—The infection of the thyroid gland is usually benign in character; swelling, redness of the skin, pain in swallowing and difficulty in breathing, in some cases hoarseness and pupillary contraction (pressure on sympathetic and recurrent nerve) are the symptoms usually present. In most of the cases only one lobe of the thyroid gland is involved.

Diagnosis.—The diagnosis of thyroiditis is usually easy. Similar symptoms are present in some cases of inflammation from hæmorrhage in preexisting goitre, so called strumitis, in tuberculosis, syphilis and malignant tumor of the gland.

Differential Diagnosis.—Strumitis is an inflammatory process in preexisting goitre, usually caused by hæmorrhage into goitre cysts. It is well to differentiate this affection from thyroiditis, an inflammation of the otherwise normal gland. The French authors make a strict distinction in the name, calling the former strumitis (*struma* = goitre), the latter thyroiditis, a distinction that should be generally adopted. The German authors, however, sometimes use strumitis for inflammation of the normal gland, thinking that inflammatory processes did not occur except in strumous glands. Microscopy, however, has plainly shown that there is a primary thyroiditis without preexisting goitre. Strumitis can be excluded by the record of the case telling us whether there was any goitre preexisting or not.

Primary circumscribed tuberculosis or syphilis of the thyroid is very rare and of slow development in comparison with the acute onset of the thyroiditis. Tuberculosis of the gland during miliary tuberculosis need not be considered here. Some cases

of very rapidly growing malignant tumors of the thyroid may give the clinical picture of thyroiditis, as the following case will show:

Mrs. B., age 55 years, was sent to me on July 28th, 1905, by Dr. J. Winter. She was suffering from a large swelling of the thyroid gland, which she claims had developed on the base of a small goitre inside of three months. She suffered from extreme difficulty in respiration so that one could hear her breathe at a distance of twenty feet. The skin over the tumor was very hot and reddened over the right lateral lobe. Fluctuation seemed to be present, at least the tumor was of very elastic, soft consistence. Temperature 103° F.; pulse 100. Here I had all signs of inflammatory process, elevation of temperature, redness of skin, etc., in a woman almost suffocating. I explained to her family that we very probably had to deal with a cancerous growth, but there might be a possibility of an abscess being present, evacuation of which might relieve the difficult respiration. I made a very small exploratory incision, went in with a small blunt forceps and found no pus. The few particles removed were of sarcomatous structure. Five days later the woman died from suffocation. The post mortem specimen showed the whole right lobe to be a big sarcoma. I will refer to this case later on and show you the specimen. (Figure II.)

A similar case where sarcoma of the gland was growing under inflammatory symptoms, fever, etc., is reported by De Quervain, of Berne. This fact, that rapidly growing sarcoma can cause symptoms of inflammation of the gland should be kept in mind.

Results of Thyroiditis.—Thyroiditis usually results in resolution; inflammatory symptoms disappear in from four to ten days. Termination in abscess occurs, but is not the rule. Suffocation from inflammatory swelling has been reported in one case (Weitenberger). A very interesting observation is the termination of thyroiditis in Graves's disease. Castaigne and Gilbert saw this in a girl fifteen years old who suffered from typhoid fever, afterwards thyroiditis followed and typical Graves's disease. Rheinholz saw a case of influenza followed by thyroiditis and Graves's disease. Gaillard reports a similar observation. A very convincing case of this kind is reported by Breuer.

A man, age 43, who enjoyed good health, became suddenly sick with inflammation of the thyroid,—swelling, pain, difficulty in breathing and swallowing. These inflammatory symptoms disappeared in five days. In the weeks following the patient noticed palpitation of the heart and peculiar nervous excitement. Two months later goitre and exophthalmus developed. The patient died seven months after onset of the trouble with all symptoms of a severe case of Graves's disease, tachycardia, exophthalmus, goitre, great loss in weight, delirium, etc. The autopsy showed a typical exophthalmic goitre with a small abscess cavity, 1 centimeter in diameter in the left lobe of the thyroid.

This occurrence may explain the frequent occurrence of Graves's disease after infectious diseases, the thyroiditis forming the connecting link. Moebius calls this kind of exophthalmus goitre secondary Graves's disease, or Basedow's disease. They are another proof for Moebius's theory that the thyroid gland is the primary affected organ in Graves's disease. This question becomes more interesting by the fact that some of the histological findings in Graves's disease and thyroiditis are

* Read before the Wayne County Medical Association, October 30, 1905.

identical. In both we find proliferation and desquamation of the glandular epithelium and disappearance of the colloid substance from the glandular follicles. Intrauterine acquired thyreoiditis (tuberculosis or alcoholism of the parents) may be responsible for some cases of infantile myxœdema.

Treatment of Thyreoiditis.—The therapy of inflammation of the thyreoid consists mainly in applications, fomentations or icebag; if abscesses occur, free incision and drainage will give prompt relief. In a few protracted cases excision of the infected lobe of gland was performed (De Quervain and Socin). The following case of acute thyreoiditis occurred in my practice in 1899:

A woman, age 25, was suffering from an attack of influenza, four days after which she noticed a swelling on the right side of the neck. Great pain, and fever up to 103° F. existed, the respiration and swallowing were difficult and painful. I applied an icebag, but in spite of this an abscess developed, evacuation of which, on November 2nd, gave prompt relief of all symptoms.

GOITRE.

The most important and frequent of the diseases of the thyreoid gland is the enlargement of the gland commonly called goitre. Several pathological conditions are comprised under this name:

1. Diffuse enlargement of the whole gland; (a) diffuse hypertrophy caused by increase of number and size of the composing elements; (b) diffuse colloid goitre, the contents of the follicles being increased; (c) diffuse vascular goitre, the blood vessels are increased in number and size; (d) diffuse fibrous goitre, increase of the fibrous tissue, a rare form which is found in some cases of cretinism. Mixed forms of these types usually constitute the kind of goitres as we find them in the diffuse swelling of the thyreoid gland at the time of puberty, pregnancy, and, with certain modifications which we will consider later on, in the exophthalmic goitre.

2. Partial enlargement of the gland, that is, one lobe of the gland, or part of one of the lobes, is increased in size. In this group we count the adenoma and the cystic tumors of the gland. Cysts are formed by increase of size of the follicles; several of these enlarged follicles unite into one, the wall thickens, bleeding occurs into the cavity and the wall of the cavity changes into tough fibrous tissue. The contents of the cysts are composed of colloid substance and blood from the hæmorrhages. Degeneration of the contents and proliferation into the wall lead to all kinds of mixed forms of tumors, so that we find, sometimes, all kinds of tissues composing cystadenomatous tumors, even cartilage and bone. A peculiar occurrence in goitre is the waxy degeneration. Waxy substance is a degenerative product of colloid and is identical with, or very similar to, amyloid substance.

An especial pathological entity is the exophthalmic goitre. I believe that a true exophthalmic goitre is entirely different from any other form of enlargement of the thyreoid gland. We may have cases in which symptoms of Graves's disease supervene in cases of simple goitres, but these cases should not be styled as exophthalmic goitre. The Germans call them Pseudo-Basedow. The true exophthalmic goitre is characterized pathologically by

(1) a thick fibrous capsule which is not separated as easily as is commonly done from the gland; (2) by an increase in size and number of the blood vessels; (3) a very broad isthmus, in fact, one can hardly speak of an isthmus in these cases, as every one knows who is familiar with operations of these cases; (4) the epithelium of the follicles is in a state of proliferation and degeneration. All these pathological findings in the exophthalmic goitre remind one of a slow degenerative process. Of rare occurrence are tubercular and syphilitic nodules of the gland. Actinomycosis of the gland has been observed once; it is interesting that in this case the affection led to symptoms of myxœdema.

Of malignant tumors, sarcoma and the cancer



FIG. 1. Exophthalmic goitre removed by the thyroidectomy. Note the capsule, the isthmus, the very large tumor, and the enlarged artery.

are met with. Both growths usually develop in glands which were enlarged previously. We find all transitions from the simple adenoma to the adenocarcinoma. Both sarcoma as well as cancer of the gland are very rapid in growth, very malignant. They very soon form adhesions to the surrounding organs, they compress the trachea so that the operations of this malignant disease of the thyreoid gland are very hopeless. Riedel, of Jena, reported lately six cases of the malignant affection of the gland upon which he operated. They all died within a short period of time after operation. Echinococcus of the glands has been recorded once.

Dangers of Goitre.—Many physicians consider a goitre a trivial matter, and indeed many people live to a ripe old age with large goitres. In countries where goitres are common, a good fraction of the population live and work with their goitres, seemingly without much discomfort. But if we consider that Kocher, only one of the famous goitre surgeons of Switzerland, the favorite home of endemic goitre, performed nearly three thousand operations for goitre, it seems apparent that even these poor peasants, who are generally afraid of the knife, must have good reasons for having the goitres removed. The dangers of goitre are known to these people from generation to generation. Zealously they used all the remedies, from the old ashes of sponge to the modern extract of the thyroid gland, and the modern operation finally seems to be welcomed as a relief. The deformity alone, although in some cases an ugly one, does not bring these poor people to the surgical clinic, for they see so many others in the village with the same large neck. But the goitre, besides the deformity, causes other

cheotomy is very difficult to perform in these cases, as the trachea is hidden under an immense tumor mass. Intubation can bring only short relief. I saved this patient with sarcoma in one spell by intubating her, only to lose her in another spell by suffocation. Suffocation from goitre has been repeatedly observed during pregnancy and, from the cases reported, excision of the goitre seems to give better results than tracheotomy.

(b) The pressure on the trachea is continued on the cesophagus and causes difficulty in swallowing.

(c) The impaired respiration causes emphysema of the lungs. All patients with large goitres have chronic bronchial catarrh. For instance, the patient referred to with the large sarcomatous goitre went to the physician only to obtain relief from her cough.

(d) Pressure on the organs and sympathetic nerves causes headache, swindle, noises in the ear and tachycardia. The heart in goitre is a very interesting study, about which a whole book has been written by Minnich (*Das Kropfherz*.)

(e) Pressure on the recurrent laryngeal nerve may cause hoarseness.

2. A consequence of the goitre to which not much attention has been paid so far is the alteration of the function of the thyroid gland by the new growth. In the glandular tissue surrounding a goitre, for instance, we find the cells flattened by pressure, the follicles small, the colloid diminished. That this may mean a serious interference in the body household no one will doubt who believes in the importance of the function of the thyroid and who knows that cretinism, myxœdema, cachexia, tetany on one side, Graves's disease on the other side, are results of impaired thyroid function. It is a matter of fact that in excision of goitres, especially of cysts and exophthalmic goitres, the part of the gland left in the body improves in function.

A final danger of goitres is the possibility of malignant degeneration. At least a good portion of malignant growths of the thyroid developed in pre-existing goitres.

Medical Treatment of Goitre.—The treatment of all the goitres is medical or surgical. Under the head of medicines the iodine and the organ extracts, thyreoidin, etc., take the first place.

We now come to the most important question: What can be accomplished by the internal and external administration of iodine in the treatment of goitre? To understand this question we have to take a short look at the physiological chemistry of the thyroid gland. For more than a hundred years it was empirically known that the ashes of our common sea sponges had a beneficial effect upon the swelling of the thyroid. Then it was suggested, in 1819, by Straub, of Berne, that the acting principle of the sea sponge was iodine, and a couple of years later Coindet, of Geneva, recommended iodine for the medicinal treatment of goitre. The drug was received with great favor; the fact that iodine did not have any influence on many goitres, also the bad intoxication of the drug produced in some cases, were overlooked by the first enthusiasts (Kocher). The iodine treatment was revived by the discovery of iodine in the thyroid gland by Bauman. This chemist proved that the normal thyroid gland contained iodine combined with al-

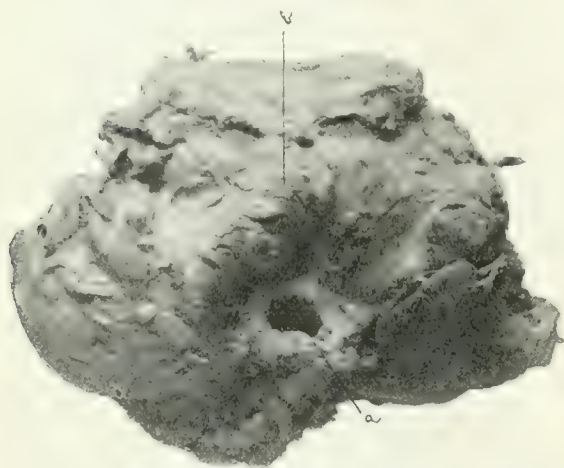


FIG. 2.—Post mortem specimen of sarcoma of the thyroid gland. (a) Trachea, (b) large tumor mass which developed retrosternally, greatly interfering with respiration and finally leading to suffocation. It will be seen how difficult this mass would render tracheotomy.

very distressing symptoms, which we will consider under two heads:

1. Symptoms caused by pressure of the goitre on the surrounding organs.

2. Changes in the function of the thyroid gland caused by the new growth.

The mechanical disturbances caused by the goitre are:

(a) Obstruction of respiration. We find short breathing complained of in nearly all cases of goitre. If the middle lobe is enlarged, the trachea is flattened and it takes the shape of a sword sheath. This becomes especially pronounced if the goitre grows retrosternal. The bony structure of the sternum prevents expansion of the tumor forward and pressure on the trachea is obvious. Patients with large goitres suffer very much from this dyspnoea. They are unable to lie down. Cyanotic and even real sudden suffocation has occurred. The specimen of sarcoma of the thyroid presented in Fig. 2 shows such a flattened trachea, which was squeezed in between the retrosternal tumor and the vertebral column. The patient died from suffocation. Tra-

bumen, as thyreiodine, and that the colloid substance was probably the carrier of the iodine. Theodor Kocher (*Deutsche Klinik, Die Therapie des Kropfes*, 1904), and Albert Kocher have made very industrious researches about the action of iodine on the glands. The elder Kocher inquired of more than one hundred physicians about their experience in regard to the action of iodine treatment. Albert Kocher determined on many patients the secretion of iodine in the urine and its relation to decrease of goitres after administration of iodine (*Mitteilungen aus den Grenzgebieten der Medicin and Chirurgie*, XIV, part IV, 1905). The conclusions of both these authors are combined about as follows: In commencing goitres, small doses of iodine are beneficial. Large doses may cause a combination of iodismus and thyreoidism, iodine cachexia that may lead to serious symptoms. Cachexia, loss in weight, palpitation and even fatal results have been observed. The more functional tissue the gland contains the more carefully iodine should be administered. Iodine has a great affinity for the thyreoid tissue and is a tonic for the thyreoid tissue. This tonic function may lead to decrease in size of the enlarged gland. The specific action of the iodine takes place only in real glandular tissue. There is no such influence on fibrous, cystic, calcareous, etc., degenerated parts of the gland. Iodine can be given internally (but then in very small doses), or better externally in ointment, as the slow absorption will protect against iodine cachexia. In all nodular goitres iodine is useless.

What is told here of the iodine is also probably true of all combined preparations, iodothyreine and the thyreoid extracts. It seems that an iodine-albuminate is the active principle of all these drugs. They have a beneficial influence on parenchymatous goitre, but are not free from danger and may cause serious symptoms. Their influence on nodular goitre is nil.

Injections.—Injections of iodine into goitre combine with the specific actions of the iodine corrosive action of the drug. Besides iodine, alcohol, carbolic acid, zinc chloride, iodoform, glycerin, ergot, etc., have been used for such injections. These injections have, no doubt, curative influence on parenchymatous and also on some small nodular and cystic goitres, but, as we will see, are dangerous—I dare say more dangerous than an operation. In the first place, their action on the thyreoid tissue cannot be limited enough to a certain diseased area of the gland; they will damage healthy tissue not only directly, but also by the fibrous contraction that necessarily follows the inflammation they produce. Further, these injections have been followed by very serious symptoms, even by death, probably when the drug was injected into a blood vessel. Heizmann gathered from the literature sixteen cases of death following immediately after an injection into the goitre. Moritz Schmidt saw such a case. Kocher reports two fatal events. Besides these fatal results, most of which are very probably not published, severe syncope and cachexia are frequently observed. I have myself seen a severe fainting spell in a young woman right after such an injection. The pulse was hardly perceptible, her face was cyanosed, the respiration very laborious. The injection was done in the outdoor

department of a hospital and the patient had to be kept in the hospital several days. Severe abscesses have been observed after injections. I had, during the last three years, operated on two patients who were previously treated by injections. One reported that she was not able to go home for three days after an injection on account of interference in breathing, but had to stop in a house close to the doctor's office. The other patient suffered from an inflammation and abscess after the injection, which confined her to her bed for seven weeks. After the partial thyreodectomy I performed on the same patient she was in bed just one week.

Dr. C. W. Hitchcock was kind enough to give me the following notes of a case which is now under his care at Harper Hospital of this city:

Mrs. E., 39 years old, married, mother of one child 11 years old, admitted to Harper Hospital on October 16, 1905. Patient had, since the age of fourteen years, a large cystic goitre. On August 13, 1905, her family physician punctured the cyst with an aspirating needle. Nearly fatal hæmorrhage from the little wound followed, continuing for several days; then a large abscess developed on site of puncture and is still discharging now (October 27, 1905). Besides this, large metastatic abscesses on left hip and left thigh have developed, and the patient is at present in a very low state of pyæmic infection following said injection into the thyreoid.¹

Kocher writes that iodoform glycerin injections in exophthalmic goitre seem to be less dangerous; all other injection methods should be discarded.

X Ray.—X rays have undoubtedly some influence on enlargement of the thyreoid. Pusey, of Chicago, writes: "I have used x rays in a good many cases of goitre; in some small parenchymatous goitres there has been permanent diminution in their size; in one of these cases the gland has shown no returning enlargement after eighteen months. In most of the cases, however, there has been no benefit." (*Journal of the American Medical Association*, May 13, 1905.). In treating enlargements of the thyreoid gland the deleterious influence of the x ray on glandular tissue should be considered. I saw, in December, 1904, a gentleman 52 years old, with a small freely movable cyst in the left lobe of the thyreoid gland. Excision would have been very easy; he preferred x ray treatment. Two months later I had occasion to examine his neck again. The cyst was much smaller, but adherent; that means development of fibrous tissue around the cyst and the destruction of valuable glandular tissue. I will not draw any conclusions from this one case, but I think x ray treatment of goitres should be discontinued until the influence of the ray on glandular tissue has been more thoroughly studied. If it is true that ovaries and testicles can be rendered sterile by the rays, their influence on the thyreoid may cause much more serious disturbances in the body.

From this the following conclusion may be drawn: External application of iodine and internal use of iodine has beneficial influence on parenchymatous goitres; the drug should be given very carefully, as large doses may be followed by iodine cachexia; iodine has no influence on nodular and cystic goitres. The same is to be told about all

¹ During the discussion following this paper Dr. H. W. Yates reported a case of death following an iodine injection into a goitre, and Dr. E. L. Sharley saw three times very severe complications, dyspnœa, etc., after such injections.

thyroid preparations. Injection treatment of goitre may be curative in some cases, but is very dangerous.

Surgical Treatment of Goitres.—From these conclusions it is obvious that still many cases of goitre have to look to the surgeon to get relief. Let us now compare what the surgeon can do for these patients. The operation of goitre is generally considered a dangerous one. Is there any foundation for this opinion? I must say that in these operations, as in operations on the other organs—the appendix, gall-bladder, the prostate, etc., a timely early operation is an entirely safe procedure. A simple nodular goitre that does not cause any serious compression of the trachea can be shelled out from within the

gland in a very few minutes, without any loss of blood and without any shock. If the cases are neglected, if the goitre is causing dyspnoea, if tachycardia exists, if former injections of iodine and carbolic acid have caused adhesions, then the operation becomes more dangerous in different ways.

(1) An anæsthetic for a patient who has obstruction in his respiration is a dangerous thing for obvious reasons. Among my patients were several who could not lie down for many months previous to operation on account of laborious breathing. For these patients the local anæsthesia after Schleich is used, and I can assure you, from an experience on six large goitres, that under proper infiltration of the tissues this method is not cruel, the patient

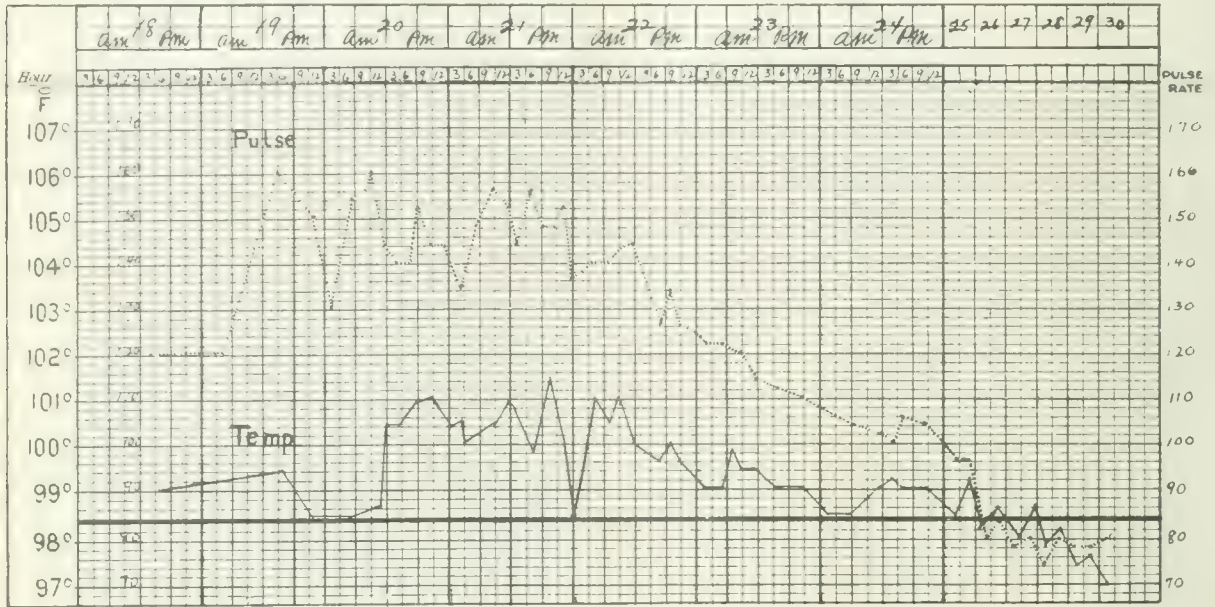


CHART I.—Thyrotoxicism after removal of cystadenoma of the thyroid gland. Note slight elevation of pulse before operation (120) and the abnormal high pulse rate after operation, out of proportion to the slight elevation of temperature.

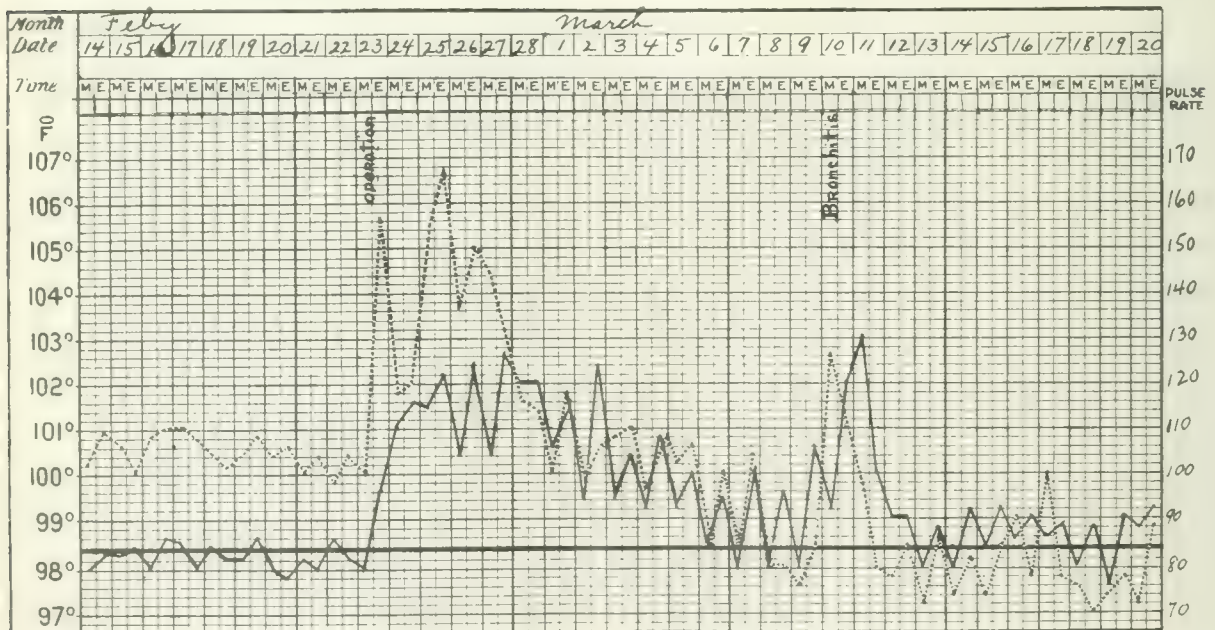


CHART II.—Acute thyrotoxicism after partial excision of the thyroid gland for Graves's disease. Note high pulse rate existing for four days after operation. There occurred at the same time profuse sweating, delirium, and polyuria. Final recovery.

does not complain of any pain, only the dragging on the trachea is felt as a disagreeable sensation. I certainly must say that any goitre causing dyspnoea should be operated upon under local anæsthesia to prevent suffocation. In very nervous patients, where a long operation without general anæsthetic is quite difficult, I proceeded a few times in the following way: I first infiltrated with Schleich's solution the parts over the enlarged middle lobe or isthmus of the thyroid gland, that is, the part that mainly causes the compression of the trachea. The dissection is quickly carried down to the capsule of the isthmus, the capsule opened, a strong ligature put through the enlarged isthmus, and under strong traction the middle lobe is liberated from its capsule, and if located retrosternally it is drawn from the retrosternal notch and freed from the trachea. After this is done the respiration usually becomes quiet, the patient can be put upon his back, chloroform or ether administered and the operation finished in the usual way.

(2) The second danger of goitre operations is hæmorrhage. This should be avoided by proper anatomical dissection. The space between the sternomastoid muscle on the outside and the sternohyoid and the sternothyroid on the inside should be freely exposed. All superficial veins are caught before dividing them, and ligated immediately. Then the enlarged part of the gland is freed all around so that we have easy access to the superior and inferior thyroid artery. The vessels are tied, and after this the excision can be done without any amount of hæmorrhage. If we do not intend to remove or excise a part of the gland, enucleation of the cysts after Socin is a safe procedure.

(3) A third danger of goitre operation may be looked for in the postoperative period, a peculiar complex of symptoms called thyreoidism. This is the same disturbance as we saw after the too free use of iodine in goitre, as we also see it in exacerbation of Graves's disease. The main symptoms of this disturbance are: rapid pulse and respiration, slight fever, perspiration, excitement, polyuria, diarrhoea, in severe cases delirium and coma. It occurs not only after operations on goitres, but also after operations and intercurrent diseases in patients with goitres, especially with exophthalmic goitres.

Most authors believe that it is due to a sudden oversecretion of the thyroid (hyperthyreoidism); in the case of operations on the thyroid to a squeezing of the thyroid secretion into the blood current. Fortunately this complication is very rare in operations for simple goitres, and if it occurs it nearly always is not very severe. If I speak of simple goitres here, I want to distinguish the simple from the exophthalmic goitre. In operations on exophthalmic goitres postoperative thyreoidism is the most dangerous of all complications and the complication that proves to be the cause of most of the fatal events in operations for Graves's disease. The only measure to protect our patients from thyreoidism is gentle handling of the gland during the operation, and, if possible, an early operation, before tachycardia, etc., have developed. If thyreoidism occurs, combined stimulating and quieting treatment, and support of the secretion—digitalis, camphor, bromide, and saline by rectum or transfusion—are indicated.

(4) As a fourth complication of goitre operations the cachexia strumi priva or the surgical myxœdema has to be mentioned. That is, symptoms exactly like the symptoms of myxœdema develop if the whole gland or too much of the gland is removed. In 1883 Kocher published the first case of this kind and warned all surgeons against total excision of the gland. Since then all surgeons know that a part of the gland must be left in the body, and I do not think that surgical myxœdema has occurred in recent years.

The dangers of goitre operations can be avoided by early operation, use of local anæsthesia if the respiration is impaired, good anatomical dissection and knowledge of the consequences of total excision. Postoperative thyreoidism is only a real danger in exophthalmic goitre.

If we look for actual statistics I will only mention Kocher's splendid results; 2,800 operations—which include very bad cases and about sixty exophthalmic goitres—with three per cent mortality. Kocher performed series of several hundred goitre operations without losing a patient. Only one in about 330 cases died. Considering that he gets some of the very worst cases of goitre and that in these 2,800 cases about 60 cases of Graves's disease are included, we can say that there should be practically no mortality in uncomplicated cases that receive timely operations.

My own experience in this particular operation has been rather small, but very satisfactory. I have operated upon 32 cases of goitre, six of which were exophthalmic goitres; 15 times I have made the partial excision of the glands, 17 times enucleation of tumor after Socin. All patients recovered. The wound healed always by first intention inside a week, except the little opening for drainage. Most of the patients left the hospital inside of ten days after the operation. Only in the operation of Graves's disease the recovery was somewhat delayed by the poor general condition the patient was in previous to the operation. All those operated upon for simple goitre were relieved from their respiratory difficulties; six of the patients, as mentioned before, were in such stages of dyspnoea that I had to operate under local anæsthesia.

EXOPHTHALMIC GOITRE.

Two years ago I wrote about the surgical treatment of Graves's disease;² hence I will be very brief to-night in discussing the question if exophthalmic goitres should be treated surgically. In answering this question two points should be considered:

1. Is the medical treatment of exophthalmic goitre satisfactory?
2. If not, is there any justification for surgical treatment of these cases?

As to the first question, I am well aware that very many cases of Graves's disease are cured, or at least become stationary, by medical means, medicines, electrical treatment, hydrotherapy and climatic treatment, but we must not forget that altogether the prognosis of Graves's disease is a serious one. I saw during the past year, in consultation, four cases of Graves's disease die during acute exacerbation of the sickness; one was a girl of 17

years; one a young woman of 21; a third about 40 years old. All three died under severest symptoms,



FIG. 3. Case of severe exophthalmic goitre before operation (March 8, 1904). Weight, 90 pounds; pulse, 130-140; extreme nervousness.

rapid and uncountable pulse, excitement, delirium, and finally coma. All three had been previously



FIG. 4.—Same patient as in Fig. 3, eighteen months after operation. Weight, 170 pounds; pulse, 80.

treated with all the skill internal medicine offers. The fourth young woman died, the symptoms of

Graves's disease becoming aggravated by a spell of influenza. If I see in my own limited practice so many fatal cases, if the death rate in the State of Michigan is about 30 per year, I think I have good reason to consider the internal treatment of Graves's disease as unsatisfactory. This opinion is held by authorities in internal medicine. Osler says: "A certain proportion of cases get well, but when the disease is well developed, recovery is rare." And again from Osler: "Operative measures seem to offer greatest relief."

Now, the second question, What does surgery offer for these cases? Kocher's statistics show 59 cases operated upon, with 45 cures, 8 improvements, 2 slight improvements, 4 deaths. Rehn collected from 291 cases operated upon for Graves's disease, of which 165 were cured, 77 improved, 12 not improved, 37 died.

My own experience is limited to six cases, of which I consider three cured, two very much improved, one slightly improved. All my cases were very bad ones, with pulse over 140, severe nervous symptoms and intestinal disturbances. Since my last publication I have operated upon three more cases. The operation of exophthalmic goitre is certainly much more dangerous than the operation for simple goitre. The danger of hæmorrhages is greater on account of the great vascularity of the exophthalmic goitre; but mainly the acute exacerbation of the sickness after the operation, acute thyreoidism is the cause of death in many of these operations. In skilled hands the mortality is reduced to 6.3 per cent. (Kocher) and in cases operated upon early to 2.4 per cent. (Rehn). An interesting question is, Which one of the different operations recommended for Graves's disease is preferable—thyreoidectomy, ligature of the thyreoid arteries, or excision of the sympathetic nerve? This question cannot be fully decided from the statistics that are at our disposal. In my six cases I always did thyreoidectomy, that is, I removed half or more of the diseased gland, and I believe this should be the operation of choice. Exophthalmic goitre is a dangerous disease in which, if internal treatment fails, surgical interference should be considered.

271 WOODWARD AVENUE.

SOME DISPLEASING RESULTS OF THE MASTOID OPERATION.

By J. A. STUCKY, M. D.,

LEXINGTON, KY.

The observations regarded in the following lines are those based upon 128 operations upon the mastoid only 15 of which were the radical or Stacke-Swartz. Few operators obtain ideal results in the majority of instances, and the failures and displeasing results are the ones that call for study and discussion.

Probably the last word has been said regarding the necessity for the immediate surgical obliteration of the mastoid cells when invaded by suppurative infection, and the recent number of classical articles as to the method and technique of doing this leaves nothing to add. Notwithstanding this there are still those who believe in waiting for external evidence of pus formation before resorting to the op-

eration. There are also those who simply evacuate the cellular structure by making free opening through the cortex, and the larger number who believe in the thorough obliteration of the entire process when once infected. Whiting's recent classical work has done much toward clearing up many of the disputed points in the modern mastoid operation, but there is still much to learn, and the need for our deciding once for all: (1) What are the pathognomonic symptoms of infection of the mastoid cells; (2) when is the best time to resort to surgical interferences in both the acute and chronic form; (3) the best preparation of the patient for the operation; and (4) the best after treatment that yields most rapid and satisfactory results.

It is astonishing how few general practitioners appreciate the necessity of giving special attention to their patients with ear trouble—equally so, how few appreciate the vast difference between the so called classical and radical operation. Within the past few months I have had one of our leading practitioners tell me that the result of mastoid disease in deceptiveness and destructiveness was a shocking revelation to him, the cause of this remark being the result of his bringing to me for a myringotomy a patient with a spasmodic earache which kept him awake at night for a week or more. This case was one of the most extensively diseased mastoids I have ever seen with large epidural abscess, with no external evidence of pus formation, and I could not convince him that swelling, temperature, pulse and fluctuation were not the chief indications for surgical interference. It was with difficulty I persuaded him to consent to my opening the mastoid as well as incising the drum membrane. The result, to use his own language, "was a shocking revelation."

The rapid advance made in otology in the last few years, the deceptive and destructive results of the invasion of la grippe, make it necessary for the otologist to labor patiently and persistently with the general practitioners until we accomplish what the abdominal surgeon has done regarding appendicitis in making them see the importance of recognizing the first symptoms and knowing just what treatment to use.

Barnhill says, "In many acute cases the most unpleasant sequela of the mastoid operation has been the extension of the necrotic process to such a degree as to require subsequent curettment, or often a secondary operation after the wound had apparently healed."

In some chronic cases where the radical operation has been performed, and the nature of the wound was such that skin grafting could not be done, the healing process was both prolonged and tedious.

McKernon remarks: "In some cases a sagging of the posterior wall of the fibrocartilaginous canal has resulted, diminishing the anteroposterior diameter near the orifice, and is due to an unnecessary separation of the periosteal lining from the posterior wall of the bony canal in making sure of the spine of Henle, than to failure properly to pack the canal with gauze in the early post-operative dressings."

J. W. Murphy, of Cincinnati, writes: "Granulations in the attic and narrowest place where the wedge of bone has been removed, have given much annoyance, occasionally atresia of the external

auditory canal. Both of these causes have been due to faulty packing of the cavity. A failure to eradicate all diseased bone in a chronic case, sometimes results in a suppurating sinus which refuses to heal, unless the wound is opened and the necrosed bone thoroughly curetted."

Chevalier Jackson, of Pittsburgh, states: "Following the radical mastoid operation I have had no permanent facial paralysis or other displeasing sequela save failure to cure the discharge in 5 per cent. of the cases. Reoperation reduced this to 2 per cent. Following the modified Swartze operation in acute cases, I have had two cases of facial palsy from neuritis, one case coming on in 48 hours, in the other 70 hours after the operation. One of these cases was a traumatic mastoiditis with fracture from a blow by a base ball. A large sequestrum lifted off the vertical portion of the facial, leaving a centimetre of the nerve exposed in the wound. I have now a case of fistula occurring six months after healing. There are tuberculous bacilli in the pus, but I am confident the condition is curable by a radical operation."

Ballenger, Chicago, mentions: (1) Granulations or proud flesh overcome by sterile dressings, instruments and hands; (2) continued or prolonged discharge overcome by the total (a) ablation of all cells in mastoid, zygomatic root, etc., (b) finishing the operation with hand burr to render the bone cavity smooth. This facilitates speedy epidermization of the wound. A rough bone wound retards the healing process.

The foregoing quotations from personal letters from a number of otologists represent a fair average of the observations and results obtained. Nothing is said of the unsightly scar, and no deaths reported except in cases where meningitis had begun before operating, the operation being performed as the last resort.

In my own cases, 128 in number, 40 per cent. of the patients had nearly all the external evidences of pus. Five of these were of the Bezold variety and the pus had burrowed down into the neck under the cleidomastoid muscle. In nine others the abscess had ruptured or been opened by the attending physician and sequestrum of the cortex had sloughed out of the wound, leaving the vitality of the soft parts so much impaired that much of it had to be removed, making healing by granulation a necessity. These cases resulted in ugly scars, some of them being remedied by plastic operations.

Some atresia of the canal was the result in three cases, due to faulty packing and neglect of after treatment. Facial paralysis due to neuritis in three cases, one following a second operation for osteomyelitis, one in which the vertical portion of the canal was destroyed by the disease leaving the nerve exposed, and one in which the nerve was injured by too forcible use of the curette during the operation. All of these patients completely recovered in from two to four months.

In the 15 radical or Stacke-Swartze operations, the results have been all that could be desired, except that in five cases obstinate granulations and lowered vitality prolonged the after treatment to a degree annoying and discouraging to both patients and myself. In all of these patients has the hearing been improved by the operations, and I

have had no fatalities. One of the most surprising after results has been in the improvement in the general health of the patients, especially in the chronic cases. I have operated in only five acute cases, patients who have not had any previous pain or suppuration in the ear, the majority suffering from acute exacerbation upon chronic condition.

To those of us who live in cities not so large but that almost daily we meet on the streets some of the living monuments of the pleasing and displeasing results of our efforts, our successes or failures, these questions become of more than passing interest, especially if it be one of those cases in which, for days or weeks, one eye never completely closes even in slumber, and one side of the face never responds with a smile. Next to these are those with the unsightly scar, or the ever present piece of gauze and plaster covering an unhealed wound.

Fortunately, injury to the facial nerve does not often occur, and with greater care and improvement in technique, except in grossly anomalous conditions or as a result of prolonged suppuration in which the canal is eroded, the nerve exposed, and neuritis a secondary result, paralysis will become less frequent.

Undoubtedly one of the most frequent and deplorable causes of many of the displeasing sequela is neglect in urging the operation early, as soon as reasonably assured suppurative infection has extended to the antrum and cells, instead of waiting until the disease has completely invaded and infected the contiguous structures, and the resistive and recuperative power of the patient are undermined by the absorption of the retained septic material.

Emphasis should be laid upon the fact that it is just as dangerous to wait for external evidence of pus formation in the mastoid process as it is in the abdomen in appendicitis. We often confront a condition where the conditions demanding operative interference are as obscure and as difficult to interpret as those found in an involvement of the appendix.

Another cause of displeasing after effects, especially slow recovery, elevation of temperature or postoperative fever, has been an insufficient and inefficient preparation of the patient before the operation. The modern mastoid operation, especially the radical or Stacke-Swartz, is to be classed with the major surgery of to-day, and aside from the conditions existing calling for the operation, we must consider the time required to do a clean, complete operation, the age and condition of the patient, particularly with respect to the nervous system. Nearly every patient is more or less septic as shown by the blood count, the vitality is far from normal, and to this condition we are to add the results of the anæsthetic plus the operation itself. Most of my earlier cases presented evidence calling for immediate operation, and only a few hours were allowed for preparation. Those cases where indican was present in the urine were followed by more or less high temperature and recovery was slow, the result followed in nearly every case where time was not taken before the operation thoroughly to cleanse the alimentary canal and administer at least two tub baths. This cannot be done in less than 24 hours, and more time should be given unless the symptoms

are urgent. Mild starvation, free purgation, and thorough bathing followed by brisk rubbing of the entire body, are the best preparations for a rapid and pleasing recovery.

It must be remembered that in septic conditions food not assimilated thoroughly is a derangement of the body chemistry. Fermentation and putrefaction go on. Ordinary bowel movement may remove some of this, but peristalsis is imperfect and much of this decayed mass remains behind in the folds and pockets of the canal. The shock caused by the anæsthetic and operation combined so lowers the already crippled vitality and so impairs elimination and restive ability that toxins are absorbed into the circulation, giving rise often to alarming symptoms, the alimentary canal furnishing a culture medium for germs that produce toxins which may speedily so paralyze the vital centers that even death may ensue.

Prolonged lithæmia also furnishes conditions for the easy and rapid development of sepsis. H. A. Houghton (*Medical Record*, May 27th, 1905) reports "thirty cases of minor infection following different operations, in nearly all of which a toxæmia of intestinal origin was present. In 27 out of 30 cases, he found indican in abnormal quantities in the urine. The practical application of the conclusions means attention to the proteid fermentation taking place in the bowel, particularly in those cases in which the urine presents a large amount of indican. It is not sufficient simply to produce evacuation of the bowels. The indicanuria must be treated by diet and other procedures looking toward complete cessation." I have seen both in my own work and in that of my colleagues slow and unsatisfactory recovery follow a very thorough and complete operation so frequently where intestinal toxæmia existed, as evidenced by the excess of indican in the urine, that I regard it as a most important factor and one that must be guarded against.

Another source of trouble is want of most thorough and complete eradication of all infected cells both of the mastoid process and of the zygomatic roots, and in the radical operation all diseased surface in the middle ear, remnants of the membrani tympani and orifice of the Eustachian tube. The bone wound must not only be left clean, but smooth; this lessens the tendency to formation of granulation tissue and hastens epidermization.

The last, and by no means the least, important factor in causing some displeasing after effects is the carelessness and indifference shown in the after dressing of the wound, and in the diet and quietude of the patient for several days immediately after the operation.

Kneipp's Hydrotherapy.—Ebstein, in *Blätter für klinische Hydrotherapie*, states that the mode of treatment given out by the late Kneipp is not a modern one. He cites a German poem of the twelfth century, entitled *Love Making*, in which the lover says that he "walked with naked feet early in the morning in the dewy grass . . . the physicians say it is healthy." Furthermore, Ebstein quotes from *Recueil général et complet des fablieux*, of Montaylon and Raynaud. A lady takes a walk in the early morning with naked feet while the dew is on the grass and remarks: "The dew is healthy in this season, as the physicians say."

A CONTRIBUTION TO OUR KNOWLEDGE OF THE POLIOENCEPHALITIS SUPERIOR (WERNICKE TYPE).*

By J. RAMSAY HUNT, M. D.,

NEW YORK,

CHIEF OF THE CLINIC FOR NERVOUS DISEASES AND INSTRUCTOR IN NERVOUS DISEASES IN THE CORNELL UNIVERSITY MEDICAL COLLEGE.

(From the Pathological Laboratory of the Cornell University Medical College.)

In the year 1881, Wernicke, on the basis of three cases, described a clinical picture running a very acute course, characterized by the development of associated ocular palsies, a staggering gait, optic neuritis and an agitated delirium, similar to delirium tremens. Ptosis was absent in these cases and the intrinsic muscles of the eyes were spared; all terminated fatally in from 10 to 14 days. Alcoholism was regarded as the chief etiological factor. Post mortem a hæmorrhagic inflammation limited to the central gray matter of the third and fourth ventricles and aqueduct of Sylvius was found, and the affection was called "Polioencephalitis acuta hæmorrhagica superior."

The syndrome as originally depicted by Wernicke, while still retaining its general and very characteristic features, has undergone certain changes and modifications. Subsequent observations show that the levator palpebræ superioris is not always spared, and ptosis often only partial has occurred in one half the cases. The intrinsic muscles of the eye are also rarely involved. Paralysis of the extremities may result from invasion of the white matter and the inflammatory process may extend to the medulla and spinal cord, constituting the so called polioencephalitis superior et inferior and the polioencephalomyelitis.

As in other forms of encephalitis, so here the termination is by no means always fatal, and many instances of complete or partial recovery are recorded. It is important to recognize these partial recoveries with their residual ocular and locomotor symptoms which might otherwise give rise to diagnostic error and confusion. The pathological anatomy of the affection has remained fundamentally the same. It is an encephalitis with a marked hæmorrhagic tendency, displaying a predilection for the central gray matter, but by no means always limited to this distribution, as described by Wernicke and the earlier observers. The white matter of the medulla and the pons is frequently involved, and in a few cases the basal ganglia and the cerebral hemispheres have shown extensive areas of encephalitis.

In a personal analysis of 23 cases with post mortem studies, the hæmorrhages and foci of encephalitis were confined to the central gray matter in 15. (In some of them the microscopical examination was incomplete.) In eight cases the white matter showed more or less extensive invasion. This latter group of cases, with disseminated lesions in both white and gray matter, form a pathological bond of union between the polioencephalitis of the Wernicke type, the so called Strümpell-Lichtenstern type and encephalitis in general.

The polioencephalitis superior also presents transitional forms to another group of cases in which the insignificant lesions found do not explain adequately the symptoms observed during life. Oppenheim and Patrick have described cases of this character which they interpret as obscure toxic states standing midway between inflammatory affections of the central gray axis and the asthenic bulbar palsy without anatomical findings. These cases are so few in number and so obscure that any generalization is impossible. They suggest, however, the possibility of selective nuclear palsies of toxic origin.

The chief interest of the case here recorded, quite typical clinically, is in the nature of the pathological findings. The evidences of hæmorrhagic encephalitis while unmistakably present are comparatively slight in degree, suggesting the action of a toxic agent in the production of symptoms. Furthermore the areas of encephalitis, while confined to the brain stem, are equally distributed in both the gray and white matter, thus stamping the case as a disseminated hæmorrhagic encephalitis as contrasted with a pure polioencephalitis.

(From the Cornell Medical Division of Bellevue Hospital, service of Dr. H. P. Loomis.)

SUMMARY OF CASE: The patient is a man, aged 40 years, with excessive indulgence in alcohol for many years. Sudden onset after an alcoholic debauch with headaches and vomiting followed by diplopia and partial ptosis. Somnolence alternating with periods of great restlessness. Incoherent delirium. Complete external ophthalmoplegia on both sides sparing the sixth nerves. Pupils are unequal, but react. Later bradycardia, irregular respirations, moderate fever, and palsies of the soft palate. Death in coma from respiratory failure. Duration of illness, five days.

CLINICAL DIAGNOSIS: Polioencephalitis acuta superior.

AUTOPSY: Pachymeningitis interna hæmorrhagica unilateralis, with fresh hæmorrhages into the subdural space. Oedema of the brain, disseminated minute hæmorrhagic foci, perivascular hæmorrhages and small scattered foci of encephalitis, equally distributed over the gray and white matter of the medulla and pons. The cerebellum, cerebral hemispheres, and basal ganglia show no evidence of encephalitis.

HISTORY OF CASE: The patient was born in Ireland, is forty years of age, family history negative. He had gonorrhœa at eighteen and a chancre with secondary manifestations at twenty-three. With the exception of the infectious diseases of childhood, his only illnesses have been diphtheria at 20 and malaria at 36. For many years his livelihood has been gained doing general work in restaurants and kitchens, affording him unusual opportunities for excessive indulgence in alcohol. He has averaged for some years from ten to fifteen beers and several whiskeys every day, besides numerous debauches. Just before the onset of the present illness he had been drinking hard. On Wednesday, October 26, 1904, he awoke in the morning with a severe headache and feeling very tired and languid. He worked all that day and the next, but on Friday, October 28th, the headaches were so severe and the prostration so great that he remained in bed. The headaches continued Friday and Saturday with great intensity, and were accompanied by vomiting. Sunday, October 30th, he walked to Bellevue Hospital accompanied by a friend, and was admitted to the Cornell Medical Division, in the service of Dr. H. P. Loomis. On admission he complained bitterly of headaches, more especially on the right side, vomiting, and great general weakness. It was noticed

* Read at the meeting of the American Neurological Association in Philadelphia.

at this time that the eyelids drooped slightly on both sides, more on the right, and diplopia was present. The pupillary reactions were normal. The gait and station showed only a general weakness. The tendon reflexes were exaggerated. The urine was free from albumin or sugar; examination of the thoracic and abdominal organs was negative. Mentally the patient was dull and somewhat confused, but responded correctly to all questions. As night approached he became restless and delirious, the temperature reached 100° F., pulse 64, respirations 26.

On October 31st the dulness and apathy has increased; patient is somnolent and at times almost stuporous. He can be aroused, however, and answers questions distinctly and correctly. The ptosis is now marked on the right side and has increased on the left. The pupils are unequal, the left is the larger, and is irregular in outline. Reactions to light and in accommodation are present, but sluggish. All of the extrinsic muscles of both eyes are paralyzed with the exception of the external recti, and a very slight inward rotation of the right internal rectus. He can stand and walk, but is very weak and staggers. The Babinsky reflex is present on both sides. The temperature ranges from 99° F. to 100° F., pulse 50, respiration 20. During the night delirium and great restlessness is prevalent, the patient continually getting out of bed.

November 1, 1904. Periods of somnolence alternating with great restlessness and low muttering delirium. He tosses from side to side, arms and legs are in constant movement, clawing the air, picking at the bed clothes. Restraint is necessary. Periods of stupor with irregular stertorous respirations. Hutchinson's face is well marked; the ptosis is complete on the right and almost complete on the left. The sixth nerves are still intact, the only other movement of the eyeballs present is a slight inward rotation of the right eye. The pupils are unequal, moderately contracted and react sluggishly. The gross motor power of the extremities is well preserved; the tendon reflexes at the knee and ankle are exaggerated. A coarse tremor is present in both upper extremities. There is pseudo-ankle clonus on the left, which is not elicitable on the right, owing to an old ankylosis (osteomyelitis with operation). The abdominal and cremasteric reflexes are present and the Babinsky reflex is elicitable on both sides. Reacts promptly to pain stimuli on the trunk and extremities. Professor Dana examined the patient at this time and confirmed the clinical diagnosis of polioencephalitis acuta superior. To-day was noted for the first time a difficulty in swallowing, with choking and regurgitation after taking liquids. A paresis of the soft palate is quite apparent on voluntary innervation. The fifth, sixth, seventh, and twelfth cranial nerves are unaffected. There is no gross defect of sight or hearing, finer ophthalmological tests are impossible. The outline of the left disc is clear and distinct, the veins distended, no optic neuritis. The right disc could not be seen. Incontinence of urine and feces. Temperature rises from 98° F. to 100° F. Pulse rate is 44, 54, 56, and 64 during the day, and full and soft; respirations 18. Patient passes into a comatose state, dying quietly at 12.45 a. m. of respiratory failure.

AUTOPSY: Pathological diagnosis: Polioencephalitis acuta superior, pachymeningitis interna hæmorrhagica, chronic apical tuberculosis (healed); chronic interstitial nephritis; chronic splenitis and perisplenitis.

The post mortem examination was made by Dr. Charles Norris, pathologist to Bellevue Hospital, fifty-seven hours after death. His notes read as follows:

Rigor mortis has disappeared. Ribs are ossified. Heart: Pulmonary and tricuspid valves normal, likewise mitral and aortic valves. No atheroma of the aorta or coronary arteries. Lungs: A few adhesions

at the apex of the right lung posteriorly. Firm adhesions over the upper left lobe; bronchi contain some mucous pus, and are slightly reddened; lungs are posteriorly oedematous; the upper lobe of the right lung is firm and on cross section is smooth; it contains whitish raised areas the size of a pinhead; the upper lobe of the left lung presents the same condition as the right; the lower lobes are reddish and dry; bronchial lymph glands are anthracotic and show no tubercles. Liver: Normal. Somewhat pale on cross section. The suprarenals are normal. Kidneys: Firm, surface granular, and the capsule adherent in places; cortex is thin and markings indistinct. The lymph nodes of mesentery are normal. Stomach and intestines are normal. The spleen is firm, capsule thickened. Brain: The dura mater is not adherent; on turning it back the under surface on the right side is found to be the seat of an extensive pachymeningitis interna hæmorrhagica, with large fresh hæmorrhages which have visibly compressed the Rolandic area. Fresh blood clots are also found in the anterior, middle and posterior fossæ of the skull on the right side, having filtered down from the cortex. The dura mater on the left side is free from any gross changes, but on very careful inspection there is visible in certain areas a very fine and delicate rusty membrane. There is no laceration of the cerebral cortex and no subpial extravasation of blood. No evidence of fracture of the skull, although the dura was carefully stripped from both, calvarium and the base of the skull. The vessels of the circle of Willis are normal. The ventricles of the brain contain a moderate amount of clear fluid. The ependyma is normal. Brain Stem: After removal of the cerebral hemispheres and the cerebellum, the medulla, pons, and basal ganglia were divided at close intervals by a systematic series of transverse cuts. The puncta vasculosa are prominent, especially in the pons Varolii, which is also soft and moist to the touch. The oedema is not so apparent in the medulla and basal ganglia. In the pons a few minute red spots appear to indicate an actual hæmorrhage, but these are small and few in number. No hæmorrhagic foci were observed in the gray or white matter of the cerebral cortex, cerebellum, or basal ganglia. From the naked eye examination alone the existence of hæmorrhagic encephalitis could not have been determined with certainty.

MICROSCOPICAL EXAMINATION: Tissues were fixed in ten per cent. formalin. Alternate levels of the medulla, including the first cervical segment, the pons and basal ganglia as far forward as the anterior commissure, were treated by me by the following methods: Nissl, Marchi, Weigert-Pal with counterstain, hæmatoxylin and eosin, Van Gieson. Large areas from the frontal and parietal lobes and cerebellum were studied by the Nissl, hæmatoxylin, and Van Gieson methods.

The result of this examination is as follows: The leptomeninges enveloping the brain stem are free from any inflammatory changes, save a few isolated collections of round cells between the layers of the pia and in the perivascular spaces at the glossopharyngeal level of the medulla. These changes are only very moderate in degree, and are present only at this level. The meningeal bloodvessels show considerable thickening throughout, especially of the media, and many of the central arteries of the pons and medulla are sclerosed and the lumen narrowed. At the level of the glossopharyngeal vagus and immediately above the nucleus ambiguus, a small focus of inflammation is present on both sides. There is perivascular infiltration of round cells and several small aggregations of mononuclear leucocytes are found scattered in the surrounding tissues. These inflammatory changes while symmetrical are more intense on one side.

At the level of the abducens nucleus a single large vessel in the gray matter of the floor of the fourth

ventricle is enormously distended with blood and traced in a series of sections, it is found to have ruptured with a small extravasation of blood into the surrounding tissues. At this same level a few vessels contain perivascular accumulations of round cells. At the levels of the trigeminus, trochlearis, and motor oculi nuclei, a few of the vessels are greatly distended with blood, some with perivascular hæmorrhages or rupture and moderate infiltration of the neighboring parts with blood cells. A few of the hæmorrhagic foci are equal in size to a grain of wheat, but the average size is from one half to one third smaller, and many are microscopic. They are not numerous, not more than four or five foci are to be found in any one section of the pons. On the whole, they are rather less frequent in the gray matter surrounding the aqueduct than in other regions. At the level of the third nerve and in immediate juxtaposition to the anterior of the oculomotor nucleus on one side one vessel only has ruptured with a small extravasation of blood, although several vessels nearby are greatly distended with blood and contain blood in the perivascular sheath. Many of the smaller vessels of the medulla and pons are greatly distended with blood, others again are of normal calibre, containing only a few corpuscles.

The neural structures of the pons and medulla, especially in the neighborhood of the hæmorrhages, appear rarefied, with well marked interstices suggesting an œdematous condition. The perivascular lymph spaces are very generally dilated, some containing a fine granular deposit. In the pons a few small aggregations of round cells are detected and an occasional vessel with perivascular accumulations of round cells, but no large or well defined area of encephalitis was discerned. In the basal ganglia adjacent to the third ventricle, as far forward as the anterior commissure, no hæmorrhages, round cell infiltration, or other indications of encephalitis could be found. The sections taken from the frontal and parietal lobes and cerebellum were likewise negative. The Marchi preparations of the medulla, pons, and tweenbrain showed no degenerations and no fat granule cells. Sections treated by the Nissl method included the first cervical segment and the nuclei of the twelfth glossopharyngeal vagus and trochlearis nerves. The cells comprising these nuclei were normal in outline, with normal processes and a centrally situated nucleus. The increased chromatophilia of the nucleus and clumping of the Nissl granules must be attributed to post mortem changes. Similar changes were observed in the cells of the cerebral cortex and cerebellum which were otherwise normal.

Dura mater. The neomembrane attached to the inner surface of the dura mater is very vascular and contains within its meshes round cells filled with blood pigment and the débris of red cells. These cells are swollen and are relatively rich in protoplasm. Extravasations of red blood cells and hæmorrhages are freely distributed between the layers of the membrane.

Remarks.—In its clinical features the case deviates but little from the usual type. The excessive alcoholism and acute onset following a debauch; the associated ocular palsies; the somnolence alternating with delirium; the staggering gait and fatal termination in four or five days, constitute a characteristic clinical picture. The development of bulbar symptoms, however, is somewhat rare, and would classify the case with the polioencephalitis superior et inferior group. The chief interest centers in the nature and distribution of the pathological findings. The recognized histological changes described in this affection were present but in a mild degree. The only well marked foci of encephalitis

were found in the medulla at the glossopharyngeal level.

A considerable number of vessels, however, throughout the pons and medulla contain accumulations of round cells in the perivascular lymph spaces, also small isolated groups of round cells are here and there demonstrable. The hæmorrhagic extravasations are slight and few in number and are confined to the pons Varolii. I would particularly emphasize the equal distribution of these lesions in both the gray and white matter. The case therefore while clinically a polioencephalitis of the Wernicke type has pathologically the lesions by no means limited to or even predominant in the gray matter. It is properly speaking a disseminated hæmorrhagic encephalitis of the pons and medulla. Interesting is the selective action of the intoxication on these structures alone. The pachymeningitis interna hæmorrhagica has been found associated with acute polioencephalitis in two other cases, those of Eisenlohr and Zingerle. Its relation to chronic alcoholism is well known and its presence in this group of cases is not surprising.

It would be difficult to say in what manner the unilateral pachymeningitis with hæmorrhages may have affected the clinical picture in my case. It may be said that while a large cortical blood clot was present at autopsy, visibly compressing the subjacent brain substance, some of which had gravitated into the fossæ of the skull, the patient had at no time had a convulsive seizure, nor was a hemiplegia demonstrable before the advent of coma.

Bibliography.

- (Cases of polioencephalitis superior acuta with autopsy.)
 Boedeker. *Archiv für Psychiatrie*, 1895, vol. xxvii.
 Brissaud et Brey. *Revue de neurologie*, 1904, p. 899.
 Church. *Journal of Nervous and Mental Disease*, 1901, p. 303.
 Eisenlohr. *Deutsche Zeitschrift für Nervenkrankheiten*, 1899; *Deutsche medizinische Wochenschrift*, 1892, No. 47.
 Goldscheider. *Charité Annalen*, vol. xvii.
 Hamilton. *Journal of Medical Research*, 1902, p. 11.
 Hori and Schlesinger. *Obersteiner's Arbeiten*, vol. iv, p. 263.
 Jacobaeus. *Deutsche Zeitschrift für Nervenkrankheiten*, 1894, vol. v.
 Köppen. *Archives of Psychiatry*, vol. xxx.
 Koshewnikoff. *Progres médical*, 1887, No. 36 and No. 37.
 Luce. *Neurologisches Centralblatt*, 1903, p. 380.
 Oppenheim. *Deutsche Zeitschrift für Nervenkrankheiten*, 1899, vi. *Archiv für Psychiatrie*, 1892, No. 10, p. 595.
 Patrick. *Journal of Nervous and Mental Disease*, 1897.
 Rainmann. *Neurologisches Centralblatt*, 1902, p. 976.
 Rennert. *Deutsches Archiv für klinische Medizin*, vol. i, 1892.
 Schüle. *Archiv für Psychiatrie*, vol. xxvii, p. 295.
 Spielmayer. *Neurologischer Centralblatt*, 1904, No. 23, p. 1126.
 Thomson. *Archiv für Psychiatrie*, 1888, vol. xix, p. 185.
 Wernicke. *Lehrbuch*, vol. ii, p. 229.
 Wilbrandt and Saenger, vol. i, p. 270.
 Wijnhoff and Scheffer. *Jahresbericht für Neurologie und Psychiatrie*, 1900, p. 443.
 Zingerle. *Monatschrift für Psychiatrie und Neurologie*, vol. ii, p. 137.

102 EAST THIRTY-SEVENTH STREET.

Hydatid Cyst of the Abdominal Wall.—Nicolo Basile, in *Riforma medica*, says that a girl, aged seven, came under his observation who had two years before suffered for some days from abdominal pain, diarrhœa, and vomiting. A tumor developed, which grew to the size of an egg. Puncture yielded a clear fluid containing succinic acid and sodium chloride, and the incision conformed the diagnosis of echinococcus.

THE SANATORIUM TREATMENT OF PULMONARY TUBERCULOSIS, WITH BRIEF DESCRIPTION OF WORK AND RESULTS AT THE STATE SANATORIUM, RAY BROOK, N. Y.*

By MELVIN P. BURNHAM, M. D.,

RAY BROOK, N. Y.,

SUPERINTENDENT.

The State of New York in establishing a sanatorium for the treatment of consumptive poor in the incipient stage, by an act of the legislature, in 1900, placed the State second in the list of States providing for the sanatorium care of this class of patients. Massachusetts had been the first commonwealth to take up the well known treatment so successfully practiced for many years in Germany, and for some time in this country in the private institution founded by Dr. Trudeau at Saranac Lake.

After two years of search and deliberation the board of trustees decided upon Ray Brook as the best site obtainable in the Adirondacks for the location of the sanatorium. Work was begun at once and completed in November, 1904. Actual operation with the reception of patients began June 20, 1904, this having been made possible by an appropriation of the legislature in 1903 providing funds for the building of tent camps. Two tent camps for males and females respectively were constructed and used during the summer of 1904, some 40 patients were treated, and in November, the main buildings being completed, the number was quickly augmented to 100.

The buildings consist of a main administration building, in which are the offices, the general dining room for patients on the ground floor, kitchen and scullery, laundry, and engine and dynamo rooms in the rear. Connected with the administration building by large solaria are two pavilions for men and women, respectively, constructed like the main building of brick with stone trimmings. The interior arrangement of pavilions is identical, consisting of rooms suitable for the accommodation of from one to three patients each. There are no wards. This plan of building has many of the advantages of the cottage system and saves greatly in the cost per capita for housing, which in a State institution is a most important factor to be considered. The buildings face the south, and on the fronts of both pavilions are protected verandas on each floor allowing life in the open air at all times, even in the worst storms of winter. These verandas are connected by covered loggias with the administration building.

As stipulated by law, the institution is for the reception of incipient cases of tuberculosis only, the definition of which I will take up in another part of this paper. Beyond the factor of incipency, the only other factors of eligibility are that the applicant shall have been a resident of the State for at least one year before making application for admission, and that he shall be unable to provide for his care and consequently be a proper charge on the county or town of which he is a legal resident. One exception is made by law, namely that pay patients, at a stipulated rate to be decided by the board of

trustees of this hospital, which at present is \$7 per week, may be received if there is room at the sanatorium for their reception, without making it necessary to reject purely charity cases which make application and are suitable cases for admission. Application for admission is made upon the official form which states the history of the case and that the patient is unable to pay for treatment, and such application is signed by the overseer of the poor or the commissioner of charities of the town or county of which the applicant is a resident, and by this application the town or county assumes responsibility for the maintenance of the patient at the rate of \$5 per week. Upon receipt of such application, examination of the case is ordered to be made by one of the State examiners, of whom there are two in each city in New York State of the second class and four in each city of the first class. Final decision as to the reception or rejection of the case is made by the superintendent upon his examination. For those wishing to come as pay patients, direct application by letter to the superintendent, followed by the official examination as in the case of the charity patient, is the course to be pursued.

Before taking up the methods of treatment, etc., I wish to report on the results obtained in the last year's work of the sanatorium; and that you may fully understand the same, I beg leave to call your attention to the following classification of cases and results, presented by the Nomenclature Committee and adopted by the National Society for the Study and Prevention of Tuberculosis at the last annual meeting held in Washington, April, 1905. I would say that it is to be tried for one year, and if after the year's use modifications are deemed necessary by members of the society, they may be made at the next annual meeting.

An incipient case is defined as follows:

1. Incipient (Favorable).—Slight initial lesion in the form of infiltration limited to the apex or a small part of one lobe. No tuberculous complications. Slight or no constitutional symptoms (particularly including gastric or intestinal disturbances or rapid loss of weight). Slight or no elevation of temperature or acceleration of pulse at any time during the 24 hours, especially after rest. Expectoration usually small in amount or absent. Tubercle bacilli may be present or absent.

You will notice that in this definition the duration of disease is not mentioned. In other words, the question of time is left out in considering an incipient case. I believe that this omission should be noted and some recognition made of the point in question, for the reason that it is the opinion of the profession in general, as I see every day, that because a patient has noted symptoms for only a short period of time the case must of necessity be incipient. This is obviously not true if one stops to consider the question of prognosis as determined by the case as a whole, which it is most necessary to do, as in our present classification of incipency we have made a case entity, considering not the lung involvement alone, but the manifest symptoms presented by the patient plus the amount of lung lesion. A case may be incipient and still the patient may have had the disease many months, and it is impossible, if we come at once to facts, to know how long any one case has been tuberculous. Many persons, no doubt,

* Read before the Physicians' Club, Plattsburg, N. Y., December 20, 1905.

have tuberculosis, recover from it, and are never aware of it, as proved conclusively by autopsy.

The definition of the amount of lung lesion as described, without the presence of the tubercle bacillus, to which the definition points, leaves a very great doubt as to whether the case may be one of tuberculosis or not, and from this standpoint, of course, is not a definition of tuberculosis at all. Koch, reporting on some 300 cases in which tuberculin had been used under his supervision a few years ago, states that 15 per cent. of cases who presented on physical examination signs of "apical catarrh" such as that defined by the phrase "slight infiltration limited to the apex" in our definition, did not react to tuberculin, and subsequent observation in every instance confirmed the opinion that the cases were not tuberculous at all.

Turban's classification, in which his class I corresponds nearest to our definition of incipient disease, is not satisfactory since he classifies the case only from the lung area involvement and does not consider it from its clinical aspect. The definition as a whole is unsatisfactory and should be changed in these two points, at least, though I wish to say that I recognize the great difficulty in defining satisfactorily incipient tuberculosis.

2. Moderately Advanced.—No marked impairment of function either local or constitutional. Localized consolidation moderate in extent, with little or no evidence of destruction of tissue, or disseminated fibroid deposits. No serious complications.

3. Far Advanced.—Marked impairment of function, local and constitutional. Localized consolidation intense, or disseminated areas of softening or serious complications.

Acute miliary tuberculosis. The results are classified as follows:

1. Progressive (unimproved).—All essential symptoms and signs unabated or increased.

2. Improved.—Constitutional symptoms lessened or entirely absent; physical signs improved or unchanged; cough and expectoration with bacilli usually present.

3. Arrested.—Absence of all constitutional symptoms; expectoration and bacilli may or may not be present; physical signs stationary or retrogressive; the foregoing conditions to have existed for at least two months.¹

4. Apparently cured.—All constitutional symptoms and expectoration with bacilli absent for a period of three months; the physical signs to be those of a healed lesion.

5. Cured.—All constitutional symptoms and expectoration with bacilli absent for a period of two years under ordinary conditions of life.

The following is a brief report on 165 cases treated at this institution from January 1, 1905, to December 31, 1905.

Twenty-five cases remained in the hospital less than two months and are not considered in this report.

Number of patients in hospital, January 1, 1905..... 71
Number of patients admitted during year..... 222
Number of patients treated during the year..... 293

¹ The length of time mentioned is, of course, somewhat arbitrary, but is intended to cover the cases which frequently occur, where the patients leave the sanatorium for various reasons, contrary to advice, after a stay of a few weeks, although all active symptoms may have ceased completely soon after entrance.

Number of patients in hospital, December 31, 1905..... 91
Number of patients to be reported on for part year..... 165

Of these 165 patients there were:

Discharged apparently cured..... 72 44 per cent.
Discharged improved..... 61 38 per cent.
Discharged unimproved..... 21 13 per cent.
Discharged unimproved..... 8 5 per cent.
Dead..... 0 0 per cent.

Total..... 260 160 per cent.

CONDITION OF THE PATIENTS ON ADMISSION

Condition of patients on admission	Incipient	Moderately advanced	Far advanced	Total	Percentage
Incipient	87	3	63	153	92
Moderately advanced	65	39	9	113	68
Far advanced	10	8	2	20	12
Total	162	50	74	286	172

The average length of stay of these 165 cases was 6.2 months.

Patients who gained weight.....150

Average gain in weight.....13.1 lbs.

Patients who lost in weight.....15

Average loss in weight.....4.1 lbs.

Number of patients in hospital, December 31, 1905.....104

Of these there are incipient.....67—64.4 per cent.

Of these there are moderately advanced.....26—25 per cent.

Of these there are advanced.....11—10.5 per cent.

Briefly stated the methods of treatment in actual use by us are as follows:

The patient on admission goes to the infirmary and is very carefully observed during the first week of his stay. On the day following admission, in all cases, careful record is made of all facts in the history of the patient, bearing on his present tuberculous condition. The question of previous illness is gone into thoroughly; also the question of tuberculosis in parents, as far as we can go in any part of the family tree. Another point helping in prognosis of the individual case, as brought out by Loomis, is that of age of parents and grandparents at their death, he having found that long lived ancestors are very valuable assets in showing the inherent resistance in the stock, not only to other diseases, but also to tuberculosis. Careful physical examination of the patient, more especially of the lungs and heart, and careful noting of conditions found. Especially are size and mobility of chest factors to be noted always. The careful examination of sputum, noting the presence or absence of tubercle bacilli, numbers and peculiarities in grouping, shape, or size, the presence or absence of secondary organisms, and of cells, measuring and describing macroscopic appearance of sputum; complete examination of urine with diazo action; blood examinations in cases showing evidence of anemia.

I would state that the blood in tuberculosis has been a very great disappointment so far as the cells are concerned. The serum offers one of the largest and most promising fields for original work in medicine to-day, but owing to the difficulties involved and the want of knowledge concerning the blood serum as a whole, the subject has been very slightly elucidated up to the present date.

If our patient is of the ordinary type, that is the incipient case, he is kept in a reclining chair on the open veranda for the first week without exercise in any form, upon regular diet. Careful observations of temperature, pulse, and respiration are made, morning and evening. If at the end of the week he has had no fever and is feeling well in all respects, he is al-

lowed to take short walks, taking them very slowly, and gradually is allowed to increase the distance, under careful observation. Should there be a rise of temperature of one degree, or even less which persists, the patient is put to bed and kept absolutely at rest until the temperature returns to normal and there remains for at least two weeks, at the end of which time exercise is allowed again under very careful observation. If the pulse shows a rate above normal, the same principle of rest is applied.

I will now describe briefly the general routine followed by the usual patient, meaning by that the afebrile case with few or no abnormal outward symptoms.

Patients rise at the blowing of a horn at 7 a. m. Those cases allowed to take breathing exercises report in the solarium at 7:30, where the exercises are held under observation by the physician. Breakfast at 7:45. Rest for an hour afterwards. At 9 o'clock patient must be upon the veranda in reclining chair and remain until 12:45. Between the hours of 10:30 and 12 certain patients are allowed to exercise, meaning walking. Breathing exercises again at 12:45. Dinner at 1 o'clock. Rest until 2 o'clock. From 2 until 5:45 on reclining chairs on verandas. Between the hours of 3:30 and 4:30 exercise is again allowed. Breathing exercises at 5:45. Six o'clock supper. One hour quiet after supper. Reclining chairs from 7 to 8:30 p. m. on verandas. At the hours of 10 a. m. and 3 p. m. milk and eggs are served to all patients. Patients retire at 9:15. All windows open.

The greatest care is used in the prevention of infection, all patients being required to carry spit cups and strictly forbidden to spit anywhere but in the cups, which are burned each morning and replaced by new ones. The strict enforcement of this regulation has made a sanatorium not only safe as a place of residence for those who have not tuberculosis, but probably made it the safest institution of any kind wherein diseases in general are treated. The treatment as applied here is upon the rational lines; no attempts at specific medication are made. Breathing exercises are allowed only in the case of patients with slight disease which is absolutely quiescent, and in this class of cases we believe them valuable. The symptoms we see here that require treatment are almost nil, excepting pyrexia, and occasional hæmorrhage; and making little of them, as is our policy, we find practically no medication necessary outside of cathartics and in rare instances an alkaline bitter taken before meals for a deranged appetite. The treatment of the patient with fever is the most important duty of the sanatorium physician and one that requires ceaseless watching of the patient and a determination to apply the treatment which is well known to be of the greatest value, namely, rest.

The early cases of tuberculosis with active lesion run a grade of fever proportionate to the extent of the lung involvement, the individual resistance of the patient, and the virulence of the infecting organism. It is of the utmost importance that a case of tuberculosis in the early stages, if having a fever not higher than 99.2° or 99.5° , persistent, be placed under conditions where absolute rest can be had, which will in most cases relieve the fever and tend to the arrest of the lung process, while with the even slight temperature of 99.2° and 99.3° we can be sure that the disease is progressive and that soon we shall have a greater degree of fever to combat

if the patient is not put at absolute rest. It is on the careful watching of each patient that the favorable or unfavorable determination of a case depends in most instances. Patients feeling well and with slight degrees of fever are hard to manage. Even in the sanatorium it requires perseverance and persistence to overcome a natural desire of the patient to be up and about, that he may take rest without such a degree of distaste on his part as will overcome the resulting good in part or whole. In the home I believe it is impossible, save in the exceptional instance, to carry out successfully this most important part in the treatment of tuberculosis.

Drugs are valueless, not to say harmful. The patient with persistent rapid pulse, not a common condition, is subject to the same treatment as is the febrile case. Hæmorrhage requires absolute rest in bed. Morphine hypodermically in liberal doses to allay nervousness and decrease the respiratory action. Active cathesis is an invaluable aid. Strapping of chest, if the lesion from which the blood is coming can be accurately determined, is of value. Specific treatment is of unproved value and probably worthless. Regarding the many symptoms that more advanced cases of tuberculosis present, I would say that as a result of some three years in the largest hospital in New York city receiving cases of tuberculosis in all stages, I believe that, beyond opium and its derivatives, drugs have slight or no value, and I will say nothing at this time concerning them.

I wish to call your attention now to the question of early diagnosis in lung tuberculosis, the most prominent factor in determining the ultimate success to be gained by sanatorium treatment, and I believe that in the whole problem of the combatting of tuberculosis there is no other point on which more exact information is needed by the general practitioner. It is on the recognition of the early case of tuberculosis that the success or nonsuccess depends in the sanatorium treatment of tuberculosis, especially as applied in the treatment of the poor. Tuberculosis among those well to do and among the poor is, as has been well said, "an entirely different affair."

To accomplish anything like lasting results in a sanatorium in the short period of six months, we cannot possibly expect to heal a lesion of the lung tuberculous in nature, and on leaving the sanatorium the patient in nearly every instance returns to relatively and in many cases absolutely poor housing with poor diet and hard work, the fatigue of which is so apt to bring about a relapse. Added to this the fact that so many have to return to follow an indoor occupation, often working amid dust and where the infection is ever present, and this with the well known fact that one attack of tuberculosis establishes no immunity from further attacks but rather increases the liability to reinfection, granting the old focus does not break down and become active, we can see the slight chance the patient has of not relapsing unless his is the exceptional early and incipient case.

In making a diagnosis of the early case, it is the general practitioner we have to look to and not the specialist in the large majority of instances. The diagnosis depends on the very careful and consistent observation of the patient for an extensive period

of time in some cases, and on the possession of every fact that can be elicited by careful history, taking careful note of the surroundings of the patient, knowledge of all symptoms, and lastly the physical examination of the case,—in other words, the case taken as a whole.

In taking up the history there is no doubt but that a family history of tuberculosis is of value to the extent that there is a much greater liability of the patient in question having tuberculosis who has this antecedent history than the one who has none. I believe to-day that this is all that can be said. The question of heredity or of tendency I will not discuss. The surroundings of the patient are found very valuable in giving us a suspicion of the presence of tuberculosis, coming from a contagion known to be existing where the patient lives or works, and in many instances on close questioning this fact can be drawn out and is a positive factor to be considered when found. Though tuberculosis is a communicable disease only and not actively infectious, like the exanthemata for instance, the value of a known present source of infection in a case is very great in helping us to make a provisional diagnosis, and we may obtain valuable help often times in considering the question of the possibility of infection through this known source.

The symptoms the early case presents are most varied, and even an enumeration would take up more time than I have to give to this part of the subject. Among the very first symptoms in many instances, long before cough, fever, sweats, etc., come on, a mild degree of anæmia may be noticed even with no loss of weight or disability of any kind. Diminution of appetite below the patient's normal, and in many cases of tuberculosis it is noted that the normal appetite may not be up to what it should be; especially is this found in the case of girls between the ages of 15 and 20. Loss of weight is exceedingly suspicious in a patient who cannot explain the same and who is not feeling quite up to par. Indigestion of different forms, especially of the stomach variety, may be a cause perhaps, or may be the result of tuberculosis. The above symptoms of anæmia, loss of appetite, weight and strength, are in many cases the earliest manifestations of a diseased process.

In the presence of fever we now come to an important and immediate symptom that demands the greatest carefulness in our consideration of a suspicious case. A temperature taken occasionally will show nothing, perhaps, if slight; and if so, as in many instances, it is neither constant nor regular in its appearance. To be of value the temperature should be obtained every two hours during the day until 10 in the evening and recorded, and preferably temperature taken by rectum. If there is a rise to 99.5° or more or even to 99.2° or 99° at any time in the 24 hours which is persistent daily, it is very suspicious that there is some tuberculous process somewhere. Chills may accompany this mild degree of fever, but they are apt to be irregular and rather of the nature of chilly sensations than real chills. With the fever there may be an active cardiac action, which is also important in the consideration of the case.

With the onset of fever, or before, or after may be noted slight cough, so called hacking variety, in

most instances in earliest cases without sputum. This cough is described by the patient as that of tickling in the throat. It is more apt to be noted early in the morning, and on lying down at night, and after meals. The presence of night sweats is not a characteristic early symptom, but may occur in cases that are not developed and with few signs not otherwise explained it is a very valuable and fairly positive symptom.

Hæmorrhage, if not proven of other origin than lungs, is one of the most positive of signs and occurring as is often the case in those who are in good health and without symptoms previously and without determinable signs in the lungs, as is also often the case, can usually be construed as caused by a tuberculous process in the lungs; practically it has almost the value of tubercle bacilli in the sputum, if we can bar out the few other conditions that might produce the hæmorrhage and thereby mislead us.

The presence of tubercle bacilli in the sputum is, of course, positive evidence of lung tuberculosis if we except the rare instances of reported cases where this is proven not to be the case. The failure to find tubercle bacilli is a point upon which much stress should be laid. A single examination of the sputum is valueless, absolutely so, and if not interpreted as it should be can be of the greatest harm to the patient. A single negative examination must never be considered as of any importance whatever, and I think that a physician on reporting to a patient should not inform his patient that tubercle bacilli were not found, but that the examination was unsatisfactory, and direct him to bring another specimen at once. The telling of patients that tubercle bacilli are not present in their sputum is usually equal to telling them that they have no lung tuberculosis, for that is the way they interpret negative findings. They thereby possess a false security and are apt to disregard advice and to pass out of the physician's sight and care until they return with an advanced form of tuberculosis. A negative result, to have any practical significance at all, and never, of course to be placed in importance in comparison with a positive examination, must be the result of careful observation of the daily specimen raised preferably in the early morning on waking for a period covering from 10 to 15 consecutive days. If absent then and in the absence of the symptoms and signs of tuberculosis save slight cough and spitting, we might determine against the presence of tuberculosis.

If in the presence of signs and symptoms indicative of lung disease, tuberculin will be needed to make a positive diagnosis, or at least as positive as may be. The injection of a susceptible small animal with the sputum might also be of value in the doubtful cases. I am not sure but that to-day there is a great deal of harm resulting from a negative examination of a single specimen of sputum.

The examination of blood and urine I will not go into since they are of no practical value, as yet, in the early diagnosis to the general practitioner. Upon the physical examination of the patient, the greatest single factor in diagnosis, must depend in the large majority of cases our decision as to whether the case is one of tuberculosis or not. The first point in making a physical examination is a

general inspection of the patient, noting any *anæmia* that may be present of the mucous membranes, any tendency to cyanosis, difficult breathing, and the general aspect of the patient.

A thorough inspection and examination should be made of the internal nares and nasopharynx and pharynx. Deviated *sæpta*, hypertrophic growths of mucous membrane covering the turbinated bones, polypoid degeneration, adenoid disease, all acting as an obstruction to the full breathing capacity, are factors to be noted, and treated after. I believe that they play not a small part in the contracting of tuberculosis, if the inhalation theory, which is the generally accepted one to-day, is the true mode of infection in the majority of cases, though the statements of von Behring made in recent years, if true, are rather against this line of reasoning. Inspection of the chest will in many cases of tuberculosis show a deformity either in the anteroposterior or lateral diameter of the chest. One of the most commonly noted being the so called flat chest, and again its opposite, the pigeon breast deformity. Retraction below the ensiform or funnel shape chest is unusual. What is certainly uncommon is to find a well formed chest in every respect. Limitations in expansion over one apex may be noted on careful inspection and palpation, in even the earliest cases, in a fair proportion of individuals. Observation on the excursion of the diaphragm is to be made out and furnishes positive evidence of much value in many cases.

Percussion should be practiced with the greatest care, going over the chest routinely in a certain definite manner and always remembering that the right apex has a note distinctly higher pitched than the left, and the same must be recognized in comparison when made with the opposite apex. Slight raise in pitch is only to be made out by the experienced physician who has his ear constantly in training. The more pronounced modifications in pitch and marked dullness over any portion of the lung show absolute evidence of some pathological condition. Palpation by detecting of transmitted spoken voice sounds and whispered voice often gives valuable evidence in cases with slight amount of infiltration, the increased transmission of the whispered voice being specially indicative, always remembering the transmission to be louder on the right apex than on the left.

Auscultation by means of direct application of the ear and by means of stethoscope give the most positive evidence that we can possess from any one source in the usual run of cases. The first change brought about by a tuberculosis process in many instances to be noted, is a modification in the normal vesicular murmur, in not a few cases marked impairment of the vesicular quality is noted over both chests, commonly described as feeble breathing. This is more apt to be found in cases of nasal obstruction and in those cases which have had as primary symptoms of the trouble, hæmorrhages. Why, I am unable to say. The roughening of the inspiratory murmur, meaning by the term a modification from the normal, is a characteristic early sign and may be accompanied by a prolongation of the expiration and raise in pitch of the same. This condition is usually noted over the apices, and in a slight degree when heard on the right side at the

apex is difficult of determination and interpretation owing to the condition being present in a slight degree normally.

Various more definite modifications described by the terms vesiculobronchial, bronchovesicular, bronchial, bronchocavernous, cavernobronchial and cavernous, changes brought about by conditions of more marked infiltration followed by ulceration and antrum formation, I will not go into in this connection. Adventitious sounds, râles, are searched for carefully as they offer most valuable evidence in the early cases. First careful auscultation, only asking the patient to breathe slightly deeper than normally. If any râles are made out, the patient is required to cough and following the cough we may note disappearance of râles previously heard. I would say that râles heard previously to cough and not after are usually unimportant. In other words, if cough clears up râles they are to be disregarded unless on repeated examination they are heard persistently before cough. Often times râles are not heard until the patient coughs and I think an examination of the chest in the early case in which the patient is not required to cough is not apt to be satisfactory.

The earliest, probably, of the adventitious signs to appear in a tuberculosis process is the so called mucus click due probably to the air on inspiration passing through the increased secretion of mucus in the smaller bronchioles as a result of the peribronchial infiltration, and coincident congestion of the inner wall of the bronchile. Next come the small sticky and crackling râles designated subcrepitant râles, the fine crepitant râles heard in the congestive stage of pneumonia are I believe never to be made out in a purely tuberculous process. The characteristic subcrepitant râle is heard usually at the apices, coming at the end of inspiration and often only after cough. After the lesion has become more advanced, the râles increase in number and assume many different qualities and variations in size which I will not discuss.

The fluoroscope will aid in diagnosis and confirm what we can make out by the use of older methods, but as it is not generally available to general practitioners I believe as a factor in early diagnosis to-day it amounts to nil.

If then a case presents some of the symptoms of tuberculosis, and on physical examination we find slight dullness with modified vesicular murmur and persistent though few râles at an apex, are we justified in the absence of a positive bacteriological examination in calling the case one of tuberculosis and advising treatment for a long period of time, which experience shows necessary to alleviate such a condition? This question comes up or ought to come up many times in the life of a general practitioner at this time, and I believe as a rule we should decide in favor of tuberculosis rather than, as is the tendency, in favor of the patient, only to find later in a fair proportion at least of cases a form and degree of tuberculosis with which at this time we are unable entirely to cope with any hope of favorable outcome. Supposing our case has no tuberculosis, we have done at least no harm in sending away the case for treatment. If such a case is sent to a sanatorium for treatment, I believe it the duty of the physician resident to make use of tuber-

culin as a test, and if negative to inform the patient thereof and send the case home with a plain statement of the facts.

The second point I wish to bring to your attention in considering the question of value of sanatorium treatment, is that of after care of cases discharged apparently cured and in various stages of arrest. We are in a position to judge of the ultimate results obtained by sanatorium treatment, having now arrived at the point in which we have a sufficient number of reported results with the after history of cases which have been discharged from sanatoria upon which we are able to draw conclusions of much value. This point has been discussed pro and contra during the past year by the profession interested in the treatment of tuberculosis, more especially in England, the *British Medical Journal* having taken up the subject extensively. The cause of the discussion I believe is found in the too positive claims advanced during the past decade by the too ardent admirers of the cure as newly presented and used by them, which claims have been in a way negated by the large number of apparent recoveries turned out of the various sanatoria which in a few months or even a few weeks demonstrated all too clearly the appropriateness of the term "apparently" as applied to the condition of recovery on discharge.

Sanatorium treatment as used to-day for the well-to-do is without doubt deserving of the term successful. Coming to the question of the poor, this is a most important side of the question, since it is among the poor that we see the most of tuberculosis. I believe that the success or non-success, meaning by that the ultimate success or non-success, depends, without doubt, upon the two points which I have mentioned and upon which at this day the general practitioner must assume responsibility, namely that the case on admission to the sanatorium be of the incipient and favorable type, and that at the end of the stay at the sanatorium the case must be placed in other hands than those of the patient, for a period of at least two years.

I have not considered in this statement the value of the sanatorium as an educational factor, but purely its value from the standpoint of its curative influence in suitable cases of tuberculosis occurring among the poor. The educational advantages are most important and constantly increasing in importance, but this is such a large subject that I do not wish to take it up further at this time.

With the extremely limited number of beds available in this country to-day for the treatment of tuberculosis by sanatorium methods, I believe it extremely unwise to accept any patient other than the incipient for treatment, and even if we had extensive provisions I believe it unwise to treat cases of incipient tuberculosis in the same institution where advanced cases are treated. The disheartening results obtained in treating the more advanced lesions of tuberculosis have a depressing effect upon a sanatorium. The curability of the disease becomes a matter of doubt in the mind of the patients, which doubt in an institution for incipient cases never arises. The patients, on the other hand, in an institution where incipient disease only is treated having too much confidence in their ability to get well, make it somewhat difficult to procure the taking of the treatment to obtain its full benefit.

The incipient case in a stay of six months, in a large proportion of cases, approximately 70 per cent., should be discharged apparently recovered, and if the patient follows a suitable routine in favorable surroundings for two years following his discharge, he should have arrived at a state of health in which the term cure is justifiable. The advanced cases, almost entirely at this day unprovided for, demand a hospital located within the city limits where they can have fresh air and proper care to prolong their lives and make them more comfortable, and what is most important, prevent their being sources of infection among the well.

The question of housing, providing suitable occupation, caring for and advising patients discharged from sanatoria apparently recovered and arrested, offers one of the largest health problems which the country has to cope with to-day, and one whose solution will decide the ultimate value to be placed upon sanatorium treatment as practiced by a State or other corporation dealing with the consumptive poor.

THE EARLY DIAGNOSIS OF GASTRIC CARCINOMA.

By HARRIS WEINSTEIN, M. D.,

NEW YORK,

ATTENDING PHYSICIAN TO THE STOMACH DEPARTMENT
OF THE GERMAN POLICLINIC.

There is no doubt of the advantages which may be gained by a radical removal of a gastric neoplasm when compared to late "gastroenterostomy" as a last resort. The best result that we may expect from a gastroenterostomy is a prolongation of life for six to 18 months, and even under the most favorable circumstances this short reprieve for the doomed unfortunate is not entirely free from very annoying symptoms. The proportion of mortality from these two operations is almost the same, but the remote results following complete resection are so much better that the hope of a possible cure in the near future may be entertained. There are histories on record in which life has been prolonged from four to eight years following pylorotomy, an advantage not to be underestimated if one considers the age of the patient when this operation is usually performed.

In view of these facts, it is the duty of the internist to turn the sufferer from gastric carcinoma over to the surgeon as early as possible after a diagnosis can be made. It must not be forgotten that the highest mortality from resection of gastric neoplasm is obtained when adhesions to neighboring organs have already formed, and that operation is entirely out of the question when neighboring glands have become infected. It is therefore of the utmost importance to diagnose these cases at a very early stage of the disease, and the physician must not neglect to employ all the known methods by which such a diagnosis may be consummated.

What is meant by an early diagnosis? Some authors claim that as long as there is no palpable tumor a radical operation should be performed, for so soon as the tumor is large enough to be palpated a considerable part of the stomach wall has already been attacked and possibly the neighbor-

ing and remote glands have been involved. This assertion, however, is only partly correct, for it is a matter of record that palpable tumors and even large parts of the stomach wall have been successfully resected. It is desirable, however, that the patient should be placed in the hands of the surgeon before the appearance of a tumor, and what is still more important, before the sufferer has become so emaciated and weakened that the result of the operation may be influenced by these very factors.

What symptoms should lead us to diagnose a carcinoma in the early stage? Unfortunately we do not possess a single characteristic symptom in the early stages of the disease, and even if we were in possession of such symptoms, patients in the vast majority of cases do not seek the physician until later in the disease, for the manifestations of this ailment are frequently very mild in the beginning, and home remedies are used until more serious symptoms develop. Even then the import of the case may not be recognized by the physician, and more valuable time is lost by treatment for nervous dyspepsia, gastritis, and the like.

In spite of the fact that there are no characteristic symptoms peculiar to the disease in its early stages, there are certain facts which, if rightly interpreted, and if the entire picture of the disease is analyzed in a painstaking manner, will lead us in the right direction. While the symptoms per se may mean very little, when taken in connection with the general appearance of the patient, the fact that the anæmia, emaciation and loss of strength are out of proportion to the mildness of the symptoms, will point toward a serious state of affairs. It is well to make it a rule to regard all those cases with suspicion wherein persons above forty, with previously healthy digestive organs, dyspeptic symptoms and persistent loss of appetite, especially for animal food, begin to be complained of. All such cases, when coupled with rapid loss of strength, require the most careful analysis, and the physician must not consider his duty performed until he has either proved or disproved the existence of malignant disease. In this connection the family history of the patient with regard to carcinoma must be carefully inquired into. A history of more or less recent traumatism in the region of the stomach must be taken into consideration, as a trauma may give an impetus to the development of a neoplasm in predisposed individuals. The motor and secretory functions of the stomach must be carefully examined. One should test for an absence of hydrochloric acid and the ferments which with the presence of lactic acid and the *Oppler-Boas bacillus* will speak for carcinoma. The presence of hydrochloric acid and absence of lactic acid fermentation, however, does not exclude malignancy, for in *ulcus carcinomatosum* we usually find hyperchlorhydria; the history of a pre-existing ulcer will lead in the right direction. Occult hæmorrhages occur in the stomach even in the early stages of the disease, and it is not unusual to find blood and pus on careful microscopical examination of the stomach contents. If in addition to these signs a blood examination shows an absence of digestive leucocytosis, a diminution of the red corpuscles, and a reduction in the proportion

of hæmoglobin, the diagnosis of cancer is almost positive.

Some cases develop suddenly while the patient is in good health. The patient begins to vomit, and this continues in spite of the treatment; he emaciates and rapidly loses strength. In some patients the disease commences with a severe hæmorrhage, which cannot be differentiated from an ulcer until the later symptoms establish a diagnosis. Where the disease begins abruptly there is, as a rule, no difficulty in arriving at a correct diagnosis. Where a diagnosis is impossible and there is suspicion of the existence of a malignant growth, an exploratory laparotomy is justifiable.

841 LEXINGTON AVENUE.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at frequent intervals. So far as they have been decided upon, the further questions are as follows:

XLVI.—How do you treat a sprained ankle? (Answers due not later than January 15, 1906.)

XLVII.—How do you treat whooping cough? (Answers due not later than February 15, 1906.)

XLVIII.—How do you treat pruritus ani? (Answers due not later than March 15, 1906.)

Whoever answers one of these questions in the manner most satisfactory to the editors and their advisors will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but not REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLV has been awarded to Dr. William Warren Potter, of Buffalo, whose article appeared on page 139.

PRIZE QUESTION NO. XLV.

INTERSTATE RECIPROCITY IN LICENSING.

(Continued from page 246.)

Dr. Hugh Crouse, of El Paso, Texas, remarks:

The necessary hardships of reexamination for medical men changing States in relocating is constantly inducing friction between boards and applicants, resulting in legal evasions on the part of the applicants only too frequently, and at all times urging a resentment on the part of the properly equipped physician compelled to resubmit to examinations in order to be legal. For such there should be a fitting remedy. That State laws regulating medical practice are proper and just none will deny, yet State laws varying but slightly as to their requirements between State and State, exist throughout the union with a constant refusal on the part of the respective boards to adopt reciprocal ex-

change of State certificates. At times such a decision is a just one, again it is a needless hardship upon the candidate. Politics and its evil influence dominate only too frequently in the selection of the board. Politics, one would presume to be absent where State laws permit the State Medical Association to select double the number from its membership necessary for composing a board from which the State executive secures the needed quota, yet often politics dominate the association's selection. Under such conditions improper men are chosen and as a result a board composed of poorly equipped medical units acts as a jury upon the fitness or unfitness of applicants. Instances are only too abundant where some member of a board ripe in political experience and verdant in medical attainments through catch questions and chicanery secures the downfall of a probable competitor, whose ability far outranks his own, and if such efforts were not used by him would result in the securing by the liable competitors of a portion at least of the practice held by the member of the board. Such results should be neutralized.

Another fault in the present existing conditions: Recent graduates and men of long experience are submitted to identical questions by the various boards. There should either be a difference, or a happy average struck. As an example: A man, gray from many years of successful practice, a graduate long since from some reputable school finds it necessary through some fiat of fate to seek a new location. He, a man ripe in experience, is not presumed to be equal to the recent graduate in the subtleties of the lesser used subjects, such as anatomy, chemistry, physiology, bacteriology, and pathology, yet with the present plan he is compelled to be compared with the young man recently out of school, and as a result finds himself plucked through his lack of knowledge of the intricacies of these subjects, while the other passes. In comparing by actual bedside tests, the old with the new medical man, the one ripened in experience is the one each of us would choose should personal or family ailments demand for us counsel. Again, men who have served as teachers in another State with honor to themselves and with advantage to their classes, having specially fitted themselves upon some one specialty mayhap, upon finding it necessary to change location are compelled in order to be legal to submit to the cross questioning upon long neglected and immaterial subjects by men their mental inferiors, who have chosen from some quiz compendium the questions submitted. Is this just? Is there a remedy? Exists there some common ground, fair and equitable, upon which all States, their medical inmates and medical applicants, may jointly stand, feeling that their various interests are being protected, the law upheld, and a standard used by which the new competitor can be proved to be properly equipped and tested, yet not be submitted to distasteful experiences, or unnecessary hardships?

For these existing conditions I believe the following suggestions, slightly changed perhaps, will serve as a remedy:

I am informed that there exists a National Association of State Examining Boards, that meets annually along with the American Medical Associa-

tion. Is this correct? If such does not exist, would it not be of an advantage to the members of the various State boards were such an association created? Granting that such exists, is it not possible that the national association existing—or that should exist—could select from its membership five to nine well chosen men, who should be elected annually by the national association, and who should serve as a national board empowered to select the necessary questions for all boards upon all branches deemed necessary to prove an applicant's fitness to practice medicine. Through the secretary of this national board the secretaries of the various State boards could be instructed as to the date of quarterly meetings to be held by the State boards, which meetings should be identical dates throughout the Union; the order of subjects should be identical, and the hour of commencing each identical. To the secretary of the State boards the national secretary could express ample time previous to their meeting a sealed package containing the printed questions to be used in testing the applicants. This package to be opened only in the presence of the entire State board, then distributed to the various members according to the branches they had in hand. The replies of the applicants to be graded by the member having the supervision of the respective branch and then pinned to the question slip upon said branch, and filed with the secretary of the States boards for future reference. Further, the national board could serve as a higher tribunal for disgruntled applicants who doubted the justness of the grading and decision. Further, a successful applicant on changing State location in the future would need but submit his certificate to the State board of his new selection, which after due consideration and favorable decision could issue at the cost only of same a second certificate that should be properly filed by the applicant with the district clerk of his county in order to perfect his legality. Should the examining board of the second State doubt the thoroughness of the grading of the first State board the second need but demand from the secretary of the first the papers of the applicants for reviewal. The expense of and compensation for the national board could be met by a small additional applicant's fee, which nationally would yield a fitting sum.

I do not believe this idea a Utopian one. I believe it to be a tenable suggestive system, just and effective. It is a method which will destroy existing friction between boards, and between boards and applicants and yet accomplish the present purpose of all present State medical laws, i. e., the simple proving of the medical and moral fitness of a new addition to the medical profession of the State, before permitting him to act as a competitor to the members of the State medical board.

Dr. Harriett Hooper, of Johnstown, Pa., says:

To the medical practitioner, who has been out of college ten years, and who then removes to another State from that in which he was licensed, the State board of examiners is a tremendous bugbear. He then begins to consider reciprocity.

Every physician knows more about his profession after years of experience than when he first came from college, but he cannot in many branches pass as good an examination.

Every State should hold examinations. Having

once passed the ordeal and received the license, why should it be necessary to go over it again or again if we move?

Is it a fair deal—either to the physician or the State? Therefore reciprocity is needed to benefit both the profession and the States.

At present every State has its own board of examiners, who make the examination questions and settle the other requirements necessary for a license.

These requirements are so different in each individual State that the separate States do not as a rule feel justified in endorsing each other's certificate.

If each State board should be represented, let us say, once in two years at a national meeting, where all examination questions, percentage and other requirements should be considered and approved; then let each State board abide by these decisions and the whole matter is settled. Of course each State board must approve of the requirements and examinations of the others. If these are approved every State will be willing to endorse any license received through them.

Let every applicant pay whatever fee is required by that State and present at the same time credentials of good moral character.

The secretary of the board of examiners should be given the authority to endorse the license given by any other State at any time when properly presented, as the waiting six months by a physician who has moved from one State to another between the dates of the regular examinations often produces the greatest inconvenience. Until such a time as this plan could be arranged and put in operation, why not have some body of physicians from all parts of the country, for example, the American Medical Association, approve of certain rules and questions which shall govern the examinations and granting of licenses. Let each State accept these and accept each other's acceptances by endorsing the license of each other.

Dr. Burdett O'Connor, of Mackay, Idaho, writes:

The question of interstate reciprocity can under existing conditions never be satisfactorily or amicably settled. The "holier than thou" proposition will always crop out among present boards.

To a layman and to all fair minded professional men and women it seems ridiculous that the different States or Territories over which "Old Glory" floats should not be upon an equal medical basis instead of requiring what is practically a different grade in every State. A man or woman who is qualified by the New York State law to practise in the empire State should be, but is not, qualified to practice in many of the western States where the examining boards are almost invariably made up of men who individually have never "passed" a State examination anywhere, but who were qualified to practice in the State wherein they were located at the time the qualifying law was passed.

There is one common sense and logical solution to the whole difficulty. Let a law be enacted empowering the President of the United States to appoint an examiner at large for each and every subject in which it is desired to examine, at a salary commensurate with the examiner's duty and labor.

Let examinations be held at the capital of each State and Territory, semiannually, on the same dates, the same queries being propounded to each applicant. The expenses of the examinations should be borne by the required examining fee. The papers, under an anonymous number, should be sent to the examiner on that particular subject for rating, and by him reported to the proper official, the averages published and licenses issued, giving those entitled to it the incontestible right to practice medicine and surgery in the United States of America and its possessions. That is the solution of the matter in a "nut shell."

Dr. Norman Barnesby, of New York, says:

This great question has been one of considerable import for years and as yet no one has solved it. It is a very hard problem considering that in our country we have too many inferior medical schools graduating men utterly unable to practice medicine.

Before considering the advisability of interstate reciprocity in licensing, I should strongly suggest the revocation of half the medical school charters, and the raising of the medical educational standard to that of our best colleges. When this has been accomplished, I should, through the proper channels, ask Congress at Washington for legislation upon the following:

1. National governmental control of all questions pertaining to the examination and licensing of all candidates who desire to practise their profession.
2. Examining board in session at Washington at all times consisting of enough members to cover all subjects pertaining to medicine, dentistry, veterinary surgery, and pharmacy.
3. The numerous State board officials to remain in office but under the control and guidance of the national board.
4. The national board to prepare 20 questions upon each subject and to send them under seal to the different State boards of medical examiners.
5. The State board examiners to select 10 questions upon each subject and submit the questions to the candidates.
6. The State board examiners to mark the papers and return, with comment, to the national board at Washington who will issue a license to successful candidates.
7. The government license to permit the candidate to practise medicine in the United States and its possessions.

Dr. L. M. Young, of Chicago, remarks:

On investigation we find in existence the embryo which will eventually settle "ad astra per aspera" the problem of interstate medical reciprocity. That embryo is called American confederation of reciprocity examining and licensing medical boards.

Two sides to the question loom up viz.: 1st. The monetary, which we must put in abeyance. 2nd. The purely professional worth. The professional worth is then the one item to bring before a meeting of the representatives of all boards. The qualifications required by the majority of the representatives would be the law, provided each and every State would have discretionary power to a certain limit.

(To be continued.)

Therapeutical Notes.

Treatment of Dermatitis Venenata.—Dr. E. S. McKee, of Cincinnati (*Lancet Clinic*), from personal experience with the poison ivy, declares that a thick lather of ordinary soap and water will afford relief to the itching and burning of the skin. He advises that the dilute alcohol of the Pharmacopœia of the United States should be applied to parts exposed to the rhus plant, in a person susceptible to the poison. If applied within two hours after exposure it will probably counteract the poison and stop the disease. After the appearance of the eruption, he found the following combination useful for stopping the burning and itching, and also effective in checking the spread of the disease:

R Alcoholis,3ii;
 Aquæ dest.3iiss;
 Liq. plumbi subacetatis diluti,3ii.
 M. For local application.

Lupus of the Nose Cured by X Rays.—Dr. Du Bois, of Geneva, reports (*Revue médicale de la Suisse Romande*, November 20, 1905) a very remarkable case of a girl, eleven years of age, who, following an attack of measles two years previously, had had a slowly developing tubercular, granulating lesion of the nose. This began at the upper border of the right nostril, and at the time of treatment, had extended over the lower half of the nose on both sides. Treatment was begun by applying a wet disinfecting compress to clean off the surface, and this was followed by exposure to x rays. The bulb was placed at a distance of 15 centimetres. The applications were made on the 1st, 4th, 9th, and 17th of May, at which time improvement was noticed. The treatment was continued at five days' interval. In another month there had been considerable diminution of the volume of the lesion. The swelling had disappeared, and new epidermis made a covering for the greater portion of the affected surface. During the following month no applications were made, but the process of repair continued. Late in August and early in September, two more exposures were made of a small surface on the inside of the nostrils. At the time of the report, in November, the cure appeared to be complete, both of the skin and mucous surfaces. Two illustrations from photographs showing the face of the child before and after treatment accompany the article. The cure appears perfect. In all 14 séances were given. Should any disposition on the part of the disease to return be manifested, the reporter is quite confident that it can be fully checked by the same treatment.

Treatment of Rheumatoid Arthritis.—Byron Bramwell, of Edinburgh (*Clinical Studies*, January 1, 1906), states that, of late years, the view that rheumatoid arthritis is the result of some form of infection has steadily gained ground. Further information is necessary, however, as to the exact cause. It has some analogies to gonorrhœal arthritis, and is noticeably frequent in women who have leucorrhœa. It is probable that the cause is different in the multiple progres-

sive form from that in the chronic monoarticular form. Perhaps, too, Hebereden's nodes are due to a different cause from the multiple progressive type. Although it is rarely curable, much can be done in the way of treatment in the multiple progressive form of the disease. This is outlined as follows: Patients with rheumatoid arthritis should be placed in the most hygienic surroundings, and their general and mental health raised to the best attainable state of efficiency. All possible causes of depression, whether of body or mind, should be avoided. A cold damp variable climate is bad; a dry warm atmosphere, with sunshine, is best. Patients should be dressed warmly, with flannel or silk underclothing, like rheumatic patients. The diet should be highly nutritious. Milk, butter, eggs, white meats of all kinds, fish, bread, and carefully cooked vegetables are recommended to be taken to the limit of the individual's digestive capabilities. Red meats are often beneficial. Cod liver oil should be given, especially in cold weather. Malt liquors, red wines, and good sound Port are permitted. In cases with pyrexia at night, and in all cases with acute exacerbations, he gives

R Quininzæ sulphat.,gr. ii;
 Acetphenetidini,grs. iii or iv;
 Sodii salicylatis,grs. v to x.

in cachet. Arsenic, tincture of nux vomica, strychnine, and the syrup of ferrous iodide are favorite remedies. Guaiacol carbonate is a useful remedy, especially in early (acute) stages. He has been disappointed with potassium iodide. For local applications, hot baths, moist or dry heat, and especially the baking apparatus, especially with the larger joints, have been very efficacious. A saturated solution of menthol in olive oil may be used to rub the joints with (20 to 25 grains to the ounce). Hydropathic treatment, especially at certain spas, is very useful. So are massage and electricity. The Faradic current may be applied to the atrophied muscles, and the galvanic to the joints. Erb recommends a descending current from the spine to the affected limbs. High frequency currents and the x ray no doubt will prove to have considerable value in some forms of disease. Electric baths in some cases seem to be useful. Cases with local causes of infection, such as leucorrhœa, should receive proper attention, and the cause removed as speedily as possible. In these, tonic remedies such as arsenic and iron should be employed as well as local treatment by douching, and astringent injections, etc.

Locomotor Ataxia.—One of the most disturbing symptoms of locomotor ataxia is the lightning pains and for these several remedies have been prescribed. Professor Raymond advises the trial of injections of sodium nitrate:

R Sodium nitrate,1.5 grains;
 Distilled water,3 drachms.

One syringe daily for ten days. After ten days' suspension the dose should be doubled. At the end of ten days, another suspension for the same period, when the dose should be increased to three times its strength. At the end of 40 to 50 injections, not before, the result is attained.

NEW YORK MEDICAL JOURNAL

INCORPORATING THE

Philadelphia Medical Journal
and The Medical News.*A Weekly Review of Medicine.*

Edited by

FRANK P. FOSTER, M. D.,
and SMITH ELY JELLIFFE, M. D.*Address all business communications to***A. R. ELLIOTT PUBLISHING COMPANY,***Publishers,***66 West Broadway, New York.**PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, FEBRUARY 10, 1906.

THE CARTWRIGHT LECTURES.

Ever since the beginning of the marvelous Japanese successes which characterized the late war with Russia we have been hearing more or less definite reports concerning the value of the Japanese medical corps and their successful prophylactic measures as applied to military and naval hygiene. Attachés, special correspondents, and other observers have told tales which interested not only the medical profession, but the public at large. With it all, however, we still lacked the point of view of the Japanese and the exact statement of what had been accomplished and how it had been done.

That was reserved for Baron Kanehiro Takaki, surgeon general (Reserve) of the Japanese navy, to tell us in the Cartwright Lectures, delivered at the New York Academy of Medicine under the auspices of the Alumni Association of the College of Physicians and Surgeons. In dealing with the subject of Japanese naval and military hygiene Baron Takaki might appropriately have adopted the time worn words of Vergil, "all of which I saw and a great part of which I was," since it was his clear sighted judgment, patient experiment, and tireless persistence which initiated and pushed forward the reforms with whose results the world has become in a measure familiar.

The first lecture, delivered on Thursday evening, January 25th, dealt with the conditions as he found them and with his long struggle against beriberi, or "kakke," which had previously crippled the fighting force of the navy. He told how

the importance of the problem early impressed him, as encountered in his father's experience when acting as one of the Imperial Guards, and how he cherished the purpose of solving it even before his English sojourn. Upon his return to Japan he set about discovering the cause of the scourge and became convinced that it was due to a disproportionate amount of nonnitrogenous elements in the food of the men. But even after the truth of his theory had been demonstrated by experiments with hospital patients, his victory was not yet won. And it is at this point that his story becomes especially instructive. We have been prone to think of the Japanese as naturally amenable to scientific truths and taking to balanced rations and hygienic regulations with the docility and precision of clockwork. On the contrary, however, the real difficulty which confronted the baron's purpose was in the opposition of the very men whom he was trying to benefit. The officers and men alike objected to the new rations, and it was only after the exercise of unlimited tact and patience for a number of years that he saw his cherished designs carried out. In short, he had to overcome just the same inertia, conservatism, red tape, and ignorance that usually obstruct reform, and it was only by the "campaign of education" that he at last triumphed with the assistance of officers who had come to his way of thinking and gave him loyal and intelligent service.

In his second lecture, on January 29th, he described some of his further experiments in food values, and also the organization and personnel of the Japanese Medical Bureau, emphasizing the importance of a high rank for the man at the head of it if its purposes were to be carried out. Many of the details of the manner in which it accomplishes these purposes we have heard before, especially the more picturesque ones, but what we need to ponder upon in the Cartwright Lectures is the fact that the Japanese have followed no principles of hygiene which we do not know and have organized their system with no greater intelligence than we possess; there is no necromancy about their success, but they have looked upon those principles not merely as a thing to be known, but, once known, to be lived by. They have not only organized a system, but have carried it out in its minutest detail.

MYSTICISM IN MEDICAL PRACTICE.

The Honorable Grover Cleveland's recent remarks before the Medical Society of the State of New York are probably to be looked upon as largely of the nature of pleasantries. But many

a truth is told in jest, and it may not be amiss to take Mr. Cleveland literally. The pith of his contention was, as we understand it, that it would be well for physicians to be more candid with their patients, to speak in plain English, avoiding the mysticism that in the popular mind is the main object of the use of technical expressions that convey either no meaning at all or else a confusing idea to the untutored understanding.

He meant, we suppose, that such a course would be particularly acceptable to the sick. In some instances it would, and in others it would not. The wary physician must "size up" his patient's mental cast before he can safely entertain the idea of unbending to him. Many persons, perhaps the majority, relish the play given to their imagination when a thing is told to them in more or less unintelligible terms—when, in other words, they are treated to high sounding gibberish. The ordinary patient craves, above all else, a name for his disease. A little ingenuity on the part of the physician will generally enable him to satisfy the craving without doing noteworthy violence to the precise diagnosis that in most instances of serious ailment must eventually be stated. With such an easy method open to him of fulfilling the patient's desire, it is little wonder that the practitioner is prone to indulge in the mysticism of technical terms; but he who invariably yields to the temptation is not a physician of the first class, not one who leaves a lasting impress upon his community.

There are patients who will not endure verbal jugglery on the part of a physician. They may be either men or women. They are exacting up to the point of being satisfied that the doctor is frank with them, but after that they do not nag at him. They trust him, and he will find them his mainstay in his subsequent career. Woe to the anachronistic owl who, with such patients, looks wise and talks in enigmas. He may continue to impress the unthinking, but with the best men and women of his field of activity he will certainly sink to the level of the charlatan, and a younger and more alert man will supplant him. A person is not necessarily a fool because he is sick, and he must not be treated like a fool simply because he is too weak to resent mysticism at the time. He will be the strongest physician who is entirely frank with those of his patients who are intelligent enough to bear frankness.

OUR CENSORIOUS CONTEMPORARIES.

It has lately been rumored that some of the members of the United States Senate feel so aggrieved at certain statements derogatory to that body that they are inclined to call upon the

Senate itself to show resentment. We should advise the gentlemen not to do anything of the kind. False and malicious assertions are very limited in their power to do harm; on the other hand, they are apt to prove in the long run beneficial to the individual or the organization that they are intended to injure. It is no truer that the blood of the martyrs is the seed of the Church than that persecution benefits the persecuted.

The *New York Medical Journal* is thriving under the efforts of some of its contemporaries to ruin it. We hope that they will keep up the attack, and we feel it incumbent on us to thank them for the good they have already done us, as shown in our rapidly growing subscription list. To confine ourselves to the period during which the *Journal* has been in the hands of its present publishers—for we cannot pretend to remember all that sought to injure us in former years—we beg to express our gratitude to the *Journal of the American Medical Association*, the *California State Journal of Medicine*, the *Pennsylvania Medical Journal*, the *Journal of the Medical Society of New Jersey*, and the *Maryland Medical Journal*. If there are any others of our dear contemporaries that have joined in the persecution, let them make themselves known, and we will give them due credit. It is no more than fair to say that we are especially indebted to the *California State Journal of Medicine*, for its vituperation has been a continuous performance for many months now, and it is free advertising of the kind that tells.

Let the Senate cheer up! Men do not train a park of artillery to kill a fly, they do not break a butterfly on the wheel, they do not laboriously pile up boulders to dam an insignificant brook, and "the most clubs are found under the best apple trees." Whoever is persistently abused may at least lay the flattering unction to his soul that he is of some importance.

THE DEVELOPMENT OF MYOMATA OF THE UTERUS.

In the course of the studies on the anatomy of the bloodvessels of the uterus which were noted in our issue for December 16, 1905, Kieffer had the opportunity of examining a number of very young myomata in the process of growth and evolution. The results of these studies are reported in the *Bulletin de l'Académie royale de médecine de Belgique*, xix, 9, 10. There are three groups of theories advanced to account for the development of myomata of the uterus—those which suppose that the myoma originates from the smooth muscle of the uterus itself, those which assume that the tumors arise from some point

in the muscular coat of the walls of the vessels, and those which assert that there is a relation between the myoma and unexpected proliferation of endothelial cells, epithelial cells, or preexisting embryonal remains (theory of Cohnheim).

The majority of the sections of myomata which Kieffer studied carried no argument either in favor of or against the theory of Cohnheim. It is necessary to say, however, that the class of preparations used in the study was not of a nature to show embryonal tissues in the process of evolution. In a uterus which contains many young myomata, the relation between the position of the tumors and the course of the uterine bloodvessels is striking. The result of the examination of many preparations has been to impress the author with the variability of the point of origin of the growths. Under the influence of some excitant, brought by the circulatory stream, these tumors may start in the muscular tissue of the uterus, in its connective tissue, or in the walls of its vessels, where they acquire the characters of pure myomata, of fibromyomata, or of diffuse or encapsulated myomata. These characters depend upon the particular localization of the growth; upon the method of its evolution, whether by pure muscular proliferation or by the successive addition of peripheral layers; upon the more or less violent reaction on the part of the muscular tissue surrounding the primitive nucleus; and upon the more or less intense reactional development on the part of the vessels surrounding the primitive nucleus. The latter factor determines the character of the primary and the secondary envelopes of the uninuclear or multinuclear myomata.

The development, the growth, and the nutrition of these tumors are accompanied by the formation of new capillaries at the expense of the preexisting vessels. It is evident that the method of vascularization of young myomata, whether by a single, central nutrient vessel or by peripherally disposed vessels, ought to have considerable influence upon their fate, their migration in the midst of the uterine tissue, their development or their stagnation, and their atrophy or their secondary degenerations, independently of other causes of their evolution which reside in the functional activity of the uterus, such as the sexual life and the general nutrition of the women attacked by them.

SMALLPOX AS A LUXURY.

Dr. Samuel G. Dixon, commissioner of health of the State of Pennsylvania, declares that smallpox is to be regarded as a luxury and not a necessity. He is satisfied that this has been demon-

strated beyond the possibility of question by the German government, and also by the recent experiences of the health authorities in fighting small epidemics in different centres in Pennsylvania. The view is certainly sustained if the question of the comparative cost of smallpox and that of preventing it is considered. Outside of the cities and boroughs, it costs the State, at the lowest estimate, \$350 for each individual quarantined to prevent the spread of the disease. The 5,841 cases which occurred in Pennsylvania in the country districts, therefore, cost more than \$2,000,000. In the little mountain township of Dunbar, Fayette County, \$5,000 was spent in the suppression of smallpox in the same year, which represents a tax of \$3.14 on every man, woman, and child in the township. To this should be added the serious money loss involved in the interruption of travel and traffic and in the loss of 446 of the inhabitants of the State by death.

The disease can be absolutely routed by thorough vaccination of the community. The condition is stated by Dr. Dixon in the following concrete example: "Recently it cost Williamsport \$284 for each one of eighteen persons who had smallpox, making in all \$5,132. On the other hand, 3,499 persons were vaccinated at a cost of twenty-nine cents each. Every successful vaccination prevented one possible case of smallpox, which means that a possible expenditure of \$284 was saved by an expenditure of twenty-nine cents." Another illustration is afforded by Shendoah, in which, after smallpox had prevailed as an epidemic for seven months, the authorities, becoming alarmed at the expense, enforced compulsory vaccination. The result was an abrupt cessation of the epidemic, and in four weeks they were able to close their smallpox hospital.

In this connection the gratifying announcement is made that the health commissioner had decided to open a bacteriological and chemical laboratory. This will enable physicians in all parts of the State to have made, without expense, examinations of blood, and cultures, in suspected cases of infectious disease. It is also intended that the new laboratory officials shall conduct sanitary analyses of water used for household purposes, and investigate other causes of local epidemics.

THE ADVANCE OF MEDICINE IN SOUTHERN CALIFORNIA.

With the appearance of its January number the *Southern California Practitioner* entered upon its twenty-first year, and in an editorial article appropriate to the occasion our esteemed contemporary speaks of the great changes that have

taken place in the southern portion of California during the period covered by its very creditable career.

When the *Practitioner* was founded, twenty years ago, says the writer, "El Pueblo de Nuestra Señora Reina de los Angeles," as the municipality now known as Los Angeles was then called, had a population of but little more than 15,000; now it has 200,000. There are more than 750 licensed physicians in the county. These facts betoken a tremendous advance in the general prosperity of the region, and they have been accompanied by commensurate progress in the condition of medical practice and teaching. The College of Medicine of the University of Southern California was founded at about the same time as the *Practitioner*. The achievements of that institution and of others connected with medicine in Southern California are familiar to us all, and not the least among the agencies that have contributed to the progress made in medicine on the Pacific slope is the *Southern California Practitioner*. We may reasonably hope and expect for it a further long and honorable career.

THE PROPOSED LEIDY MEMORIAL.

At a recent meeting of a number of prominent citizens of Philadelphia it was resolved that a statue of the late Dr. Joseph Leidy be set up in City Hall Plaza in that city. The cost is estimated at \$10,000, and it is altogether appropriate that members of the medical profession should contribute largely to the fund. The treasurer is Mr. Edward B. Smith, of No. 511 Chestnut Street.

NEWSPAPER HYDROPHOBIA.

The Philadelphia newspapers recently treated their readers to a harrowing narrative concerning a small boy who was supposed to have been bitten by a dog, and in the intervals of convulsions was "snapping at his attendants and barking like a dog," in the throes of hydrophobia. A number of years ago a young woman in Camden was said to be suffering from this dreaded disease, and Professor Joseph Pancoast was requested to go and see her. When he was told that she was "snapping and barking like a dog," he immediately replied "Then she has not hydrophobia," and this negative diagnosis turned out to be true, as she was only suffering with fear and hysteria. The fact that no one ever saw a hydrophobic patient "snapping and barking" does not deter the average newspaper reporter from indulging himself with this little flight of imagination, merely in order to give the

account a "touch of verisimilitude" and make it more graphic. In the case of the boy, Dr. Wadsworth, the coroner's physician, found no evidence of rabies, but discovered that death had in reality been caused by typhoid fever. The typhoid delirium had been mistaken for rabies. The coroner has now formulated the rule not to accept a diagnosis of death from hydrophobia unless it is confirmed by autopsy.

Obituary.

GEORGE RYERSON FOWLER, M. D.,

OF BROOKLYN.

Last week we briefly noted the fact that Dr. Fowler had been suddenly seized with symptoms referable to the vermiform appendix while he was on his way to Albany to attend a meeting of the New York State Board of Medical Examiners and the centenary meeting of the Medical Society of the State of New York. Though he was operated upon promptly and skilfully, his condition was then judged to be critical, but there seemed to be a fair prospect of his recovery. To our very great regret, we are now compelled to announce his death, which took place on Tuesday evening, February 6th.

Dr. Fowler was born in 1848, and he was a graduate of the Bellevue Hospital Medical College, of the class of 1871. He entered upon practice in Brooklyn, and soon achieved eminence as a surgeon. He was a high medical officer of the National Guard of the State of New York, and as a volunteer surgeon in the war with Spain he rendered distinguished service. He was the author of a work on *Appendicitis* and of a *Treatise on Surgery*, both of which are standard books. He was, on the surgical staff of many hospitals and was in every way an active promoter of the advance of surgery and of the welfare of his fellow men. Personally, he was of a most genial nature, and his loss will be felt by his many friends as an individual grief.

WILLIAM G. PORTER, A. B., M. D.,

OF PHILADELPHIA.

Dr. Porter died at his home, on Old York Road, near Cheltenham Avenue, Philadelphia, on January 30th, aged fifty-nine years. He was born on April 25, 1846, and received his academic education at the Ferris School and was graduated with the degree of bachelor of arts from the University of Pennsylvania in 1866. In 1868 he was graduated from the Medical Department of the University of Pennsylvania. He was a resident physician in the Philadelphia Hospital and later was physician to the Philadelphia Dispensary. Subsequently Dr. Porter devoted his time to surgery, and for many years he was one of the surgeons to the Presbyterian Hospital. He was also consulting physician to the Philadelphia Dispensary and to the Educational Home for Boys.

News Items.

NEW YORK CITY AND STATE.

The Geneva (N. Y.) Medical Society.—At a meeting held on Thursday, February 1st, Dr. H. J. Knickerbocker read a paper on Intestinal Antiseptics.

The Society of Physicians of the Village of Canandaigua, N. Y.—At the monthly meeting of the society held on Thursday, February 1st, Dr. A. W. Armstrong read a paper on The Therapeutic Value of Exercise.

The Medical Society of the County of Rensselaer, N. Y., will celebrate its one hundredth anniversary, at Troy, on Thursday, February 22, 1906. Addresses will be made at the afternoon session by several speakers, and a banquet will be held at the Troy Club in the evening.

A Reception to Baron Takaki will be tendered by the New York Academy of Medicine on February 15th. After the regular exercises of the meeting the following programme will be presented: A Paper on Visceral Arteriosclerosis, by Dr. Harlow Brooks; a Paper on Arterial Tension, by Dr. Theodore C. Janeway; remarks on the Medical School in Japan, by Baron Takaki.

The Syracuse (N. Y.) Academy of Medicine.—The following programme was prepared for a meeting held on Tuesday, February 6th: A Case of Kidney Stone, with Skiagraph and Specimen, by Dr. F. W. Sears; Report of Case of Duodenal Ulcer, with Operation, patient presented, by Dr. F. H. Flaherty; Report of a Case, by Dr. W. D. Alsever.

The Medical Society of the Borough of the Bronx.—The next regular meeting will be held at the Bronx Masonic Temple, One Hundred and Seventy-seventh Street and Washington Avenue, on the evening of Wednesday, February 14, 1906. Dr. Charles E. Nammack will read a paper on The Practical Management of Typhoid Fever. The reading of the paper will be followed by a general discussion.

The Medical Association of Troy and Vicinity.—A meeting of the association was held on Tuesday, February 6th. There was to be an election of new members, and the following papers were to be presented: The Report of a Case of Landry's Paralysis, by Dr. P. C. Curtis; A Statistical Report of 200 Cases of Typhoid Fever, by Dr. P. A. Hull; The Report of a Case of Cornual Pregnancy, with Exhibition of a Specimen, by Dr. E. D. Ferguson.

The Elmira (N. Y.) Academy of Medicine.—A meeting of the academy was held on Wednesday, February 7th. The following programme was arranged for the occasion: A paper by Dr. P. N. Barker Troy, Pa. (title not given); Intra Cranial Disorders from Suppuration in the Mastoid and Accessory Sinuses of the Nose, by Dr. George M. Case; History of Aconite and its Effects Upon the System, by Dr. S. E. Palmer; Report of a Case of Typhoid Fever, by Dr. I. H. Stanley.

The Society of Sanitary and Moral Prophylaxis.—The following was the programme for the last meeting of the society held on February 8th: Should Education Concerning the Nature and Dangers of Venereal Disease be Given to Men of the Army and Navy Services? by Colonel Valery Havard, assistant surgeon general of the United States Army, and George E. H. Harmon, medical director in the United States Navy; Should the Aid and Cooperation of the National Government be Enlisted in Carrying on this Work? Resolutions offered by Dr. Louis L. Seaman; Should the Great Body of the General Public be Enlightened as to the Extent and Danger of Venereal Diseases to the Individual and to Society and the Modes of Contagion, Direct and Indirect, by Dr. L. Bolton Bangs and Dr. Egbert H. Grandin; Since the Ordinary Channels for Communicating Such Knowledge to the Public are Closed, Through What Agencies Can this Enlightenment be Conveyed? by the Honorable Homer Folks. A general discussion followed.

The Medical Society of the County of Oneida, N. Y.—At a meeting held on Tuesday, January 23, 1906, the society adopted a new constitution and by laws, as required by the consolidation of the two State medical bodies. The by laws and constitution adopted conform to the changes brought about by the consolidation. The annual meetings will hereafter be held in January instead of in April. Officers for the ensuing year were elected as follows: President,

Dr. Herbert G. Jones, of Utica; vice-president, Dr. Conway A. Frost, of Rome; secretary, Dr. William B. Roemer, of Utica; treasurer, Dr. Earl D. Fuller, of Utica; librarian, Dr. Smith Baker, of Utica; censors, Dr. Walter C. Gibson, of Utica; Dr. Charles E. Smith, of Whitesboro; Dr. Fred. J. Douglas, and Dr. Morris J. Davies, both of Utica; Dr. T. Z. Jones, of Waterville, and Dr. Charles Bernstein, of Rome; delegates to the house of delegates, Dr. George Seymour, of Utica, and Dr. Thomas P. Scully, of Rome, for two years and Dr. T. Z. Jones, of Waterville, for one year.

The Late Dr. Ezra H. Wilson.—The council and college faculty of the Long Island College Hospital having heard with profound grief of the death of Ezra H. Wilson, M. D., have ordered the following expression of the deep sense of the loss sustained by themselves personally, the Long Island College Hospital, and the profession of medicine, to be placed on the minutes of the board: Ezra H. Wilson, M. D., having distinguished himself in his preliminary studies of medicine, devoted his life to the study of pathology and bacteriology. His work along these lines, as original investigator and instructor of the youth, has given his name a high place among the honored and distinguished men of the profession of medicine. For many years as a director of the Hoagland Laboratory, a member of the council of the Long Island College Hospital, a member of the health board of this city, he exercised great influence for good. We feel that his untimely death has deprived us of a valued friend and worker, and the city in which he dwelt, and the profession of medicine of one of those modest, earnest, able students, whose work is beyond price. Elias H. Bartley, M. D., Joseph H. Raymond, M. D., Henry A. Fairbairn, M. D., committee.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending February 3, 1906:

	February 3 (—)		January 27 (—)	
	Cases.	Deaths.	Cases.	Deaths.
Measles	1,489	52	1,468	34
Diphtheria and croup	378	39	348	41
Scarlet fever	208	7	226	16
Smallpox .....	..	..	..	..
Chickenpox	180	..	215	..
Tuberculosis	343	178	404	178
Typhoid fever	41	3	29	5
Cerebrospinal meningitis	28	17	23	16
	2,667	296	2,713	290

Society Meetings for the Coming Week:

MONDAY, February 12th.—New York Academy of Medicine (Section in General Surgery); Medical Association of the Greater City of New York; Society of Medical Jurisprudence, New York; New York Academy of Sciences (Section in Chemistry and Technology); New York Medicohistorical Society (private—anniversary); New York Ophthalmological Society (private); Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private); Corning, N. Y., Medical Association.

TUESDAY, February 6th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, February 14th.—Medical Society of the Borough of the Bronx, New York; New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox, Mass., Medical and Surgical Society (private).

THURSDAY, February 15th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of the City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, February 10th.—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-Graduate Medical School and Hospital; Manhattan Medical and Surgical Society (private); New York East Side Physicians' Association; Baltimore Clinical Society; Chicago Gynecological Society.

PHILADELPHIA AND THE MIDDLE STATES.

Philadelphia Municipal Hospital Census:

	Remaining last report.	Received	Dis- charged.	Dead.	Re- maining
Diphtheria	85	135	121	18	81
Scarlet fever	71	67	34	5	95
Other diseases	11	4	12	2	1

Atlantic City Personals.—Dr. Edward Guion has been appointed by the city board of education chief medical inspector of public schools. Dr. W. F. Ridgway has been appointed by the local board of health physician in charge of the department of contagious diseases.

Public Sanitation.—The Board of Health is preparing a series of placards, which it is proposed to post in the various portions of the Chinese settlement in Philadelphia, which shall set forth rules for the sanitation of the colony.

The Board of Education, through a special committee, has recommended the appropriation of \$32,000 for the employment of a force of trained nurses for the public schools.

The New Jersey State Sewerage Commission visited Atlantic City on January 28th, for the purpose of making a personal inspection of the plant and of the plans recently designed by Professor F. H. Snow (now chief engineer of the Pennsylvania State Health Department). Among those who accompanied the commission on its tour of inspection were Professor Snow, Mr. F. C. Poucher, of New York, and Dr. Edward Guion, superintendent of the sanitary department of the Atlantic City Sewerage Company. The plans, representing an outlay of over \$600,000, were approved and commended for their thoroughness.

Scientific Society Meetings in Philadelphia for the Week Ending February 17, 1906.—Monday, February 12th, Section in General Medicine, College of Physicians; Wills Hospital Ophthalmic Society. Tuesday, February 13th, Kensington Branch, Philadelphia County Medical Society; Philadelphia Pædiatric Society; Botanical Section, Academy of Natural Sciences. Wednesday, February 14th, Philadelphia County Medical Society. Thursday, February 15th, Section in Gynecology, College of Physicians; Section Meeting, Franklin Institute. Friday, February 16th, University of Pennsylvania Medical Society; American Philosophical Society; West Philadelphia Branch, Philadelphia County Medical Society.

Philadelphia Bureau of Health Statistics.—For the month of December, 1905, the Division of Medical Inspection reported 7,019 inspections, excluding schools; 720 fumigations ordered; 24 cases reported for special diagnosis; 3,790 visits to schools; 544 children excluded from school; 380 cultures taken; 780 injections of antitoxine given, and 400 vaccinations made. In the Division of Vital Statistics 2,003 deaths were reported; 2,359 births were reported and 239 marriages were recorded. In the Division of Milk Inspection 5,978 inspections were made of 130,707 quarts of milk, of which 538 quarts were condemned. Eleven chemical and 916 microscopical examinations were made. In the Division of Meat and Cattle Inspection 2,832 sanitary inspections were made, of which 8 were found unsanitary; 2,832 inspections of dressed meats were made, with 168 condemnations; 87,042 stock yard inspections were made, with 103 condemnations; 2,041 postmortem examinations were made, with 86 condemnations. In the Division of Disinfection 196 fumigations were done for scarlet fever, 395 for diphtheria, 165 for typhoid fever, 164 for tuberculosis, 481 for miscellaneous diseases, and 92 schools were fumigated. In the bacteriological laboratory 1,440 examinations were made for diphtheria, 391 for the serum diagnosis of typhoid fever, 876 bacteriological examinations of milk, 99 of sputum were made, and 3,227,500 units of antitoxine were supplied. In the chemical laboratory 150 analyses were made.

Charitable Bequests.—The executors and trustees of the estate of Simon Muhr distributed \$6,000 to various charitable medical institutions in Philadelphia on January 25th. The following is a partial list of the institutions benefited and the amounts each received: Jewish Hospital Association, \$1,500; Jewish Foster Home, \$900; United Hebrew

Charities, \$300; Pennsylvania Hospital, \$300; Jefferson Medical College, \$300; Philadelphia Home for Incurables, \$300; Philadelphia Polyclinic, \$150; Philadelphia Lying-in Charity, \$120; Women's Hospital of Philadelphia, \$120; Children's Hospital of Philadelphia, \$120; West Philadelphia Hospital for Women, \$60; Sanitarium Association, \$300; Pennsylvania Society to Protect Children from Cruelty, \$150; Children's Aid Society, \$120; Northern Home for Friendless Children, \$120; Northern Day Nursery, \$60; Home Missionary Society, \$60; Southern Home for Destitute Children, \$120; Home for Aged and Infirm Colored Persons, \$150; Pennsylvania Retreat for Blind Mutes, \$60; Pennsylvania Working Home for Blind Men, \$60; Old Ladies' Home of Philadelphia, \$60. By the will of V. E. Archambault, Jr., the Pennsylvania Society to Protect Children from Cruelty, the Pennsylvania Society for the Prevention of Cruelty to Animals, the French Benevolent Society, and the Home for the Aged of Holy Trinity Church receive \$5,000 each. By the will of Frances W. Lang, just admitted to probate, \$5,000 of her \$30,000 estate is to be given to St. Timothy's Memorial Hospital and House of Mercy, Roxborough, for the endowment of a bed to be known as the John Lang Memorial. To the Baptist Orphanage at Angora, and the Baptist Home, at Seventeenth and Norris Streets, bequests of \$1,000 each are made. By the will of Nicholas Lennig, the Maternity Hospital receives \$10,000, the Children's Aid Society receives \$5,000, the Philadelphia Dispensary receives \$1,000, the Children's Country Week Association receives \$5,000, the Merchants' Fund of Philadelphia receives \$5,000, the Pennsylvania Society to Protect Children from Cruelty receives \$5,000, the Sanitarium Society for Children receives \$5,000, the Union Benevolent Society receives \$5,000.

The Health of Philadelphia.—The following cases of transmissible diseases were reported to the Bureau of Health for the week ending January 27th:

	Cases	Deaths
Malarial fever	1	0
Typhoid fever	339	17
Scarlet fever	51	9
Chickenpox	63	0
Diphtheria	86	14
Cerebrospinal meningitis	8	4
Measles	656	15
Whooping cough	14	4
Tuberculosis of the lungs	120	70
Pneumonia	212	88
Erysipelas	22	2
Puerperal fever	1	1
Tetanus	1	0
Septicæmia	1	1
Mumps	3	0
Cancer	15	24

The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 7; dysentery, 1; diarrhœa and enteritis, under 2 years of age, 29.

The total deaths numbered 583, in an estimated population of 1,469,126, corresponding to an annual death rate of 20.64 in 1,000 population. The total infant mortality was 148; under one year of age, 106; between one and two years of age, 42. There were 38 still births; 24 males and 14 females. The temperatures were unusually high. On the 22nd the thermometer registered 70° and on the 23rd 71°. There was 0.16 inch precipitation.

BOSTON AND NEW ENGLAND.

Personal.—Dr. Seth C. Gordon, of Portland, who has been actively engaged in practice for more than fifty years, is planning a trip to Japan.

The Portland (Me.) Medical Club.—A meeting was held on the evening of Thursday, February 1st. The paper of the evening was by Dr. E. W. Gehring, on Physiological Therapeutics.

The Mortality of Springfield (Mass.) in 1905.—According to the annual report of the board of health, the total number of deaths in Springfield in 1905, was 1,120, 29 less than in 1904. The death rate was 15.20 in 1,000, the lowest since 1901, when it was 15.06. Pneumonia caused 121 deaths, tuberculosis 120. Infectious diseases were as follows: Diphtheria, 214; scarlet fever, 107; typhoid fever, 225; measles, 166. Seventy-three cases of tuberculosis have been reported, but physicians have been negligent in reporting this disease. An organized effort is to be made this year to deal with tuberculosis; the greatest aid to the board would be the prompt reporting of cases. A tuberculosis hospital near the city is desirable. Diphtheria caused 27

deaths, being prevalent during the early part of the year. There was one death from scarlet fever, and four from measles. Only 29 cases of typhoid fever had been reported up to August 1. In the remainder of the year 186 were reported.

BALTIMORE AND THE SOUTH.

The Therapeutic Society of the District of Columbia.—At the last meeting, held on Saturday, February 10th, Dr. Arthur J. Hall was to read a paper on Perforating Ulcer of the Foot.

The Floyd (Ga.) County Medical Society.—At the last meeting, held on Tuesday, February 6th, the programme consisted of a symposium on Tuberculosis, divided as follows: Introductory Sketch, by Dr. R. P. Cox; Cause, by Dr. W. L. Funkhauser; Home, Town, and Transportation Sanitation, by Dr. T. R. Garlington; Treatment, by Dr. L. P. Hammond. The meeting was open to the public.

The Washington (Md.) County Medical Society.—The first regular meeting for 1906 was held at Hagerstown, on Thursday, February 8th. The programme for the meeting was as follows: In the forenoon, Dr. Joseph Price, of Philadelphia, was to hold a clinic at the Washington County Hospital. At the afternoon session, Dr. Price was to read a paper, and in the evening a smoker was to be held.

The Cherokee (Texas) County Medical Society.—At the regular meeting of the society, held on Friday, January 26th, the following officers were elected for the ensuing year: President, Dr. J. F. Johnson, of Rusk; vice-president, Dr. R. B. Longmire, of Jacksonville; secretary and treasurer, Dr. J. B. Ramsey, of Alto; Dr. Ramsey was also elected delegate to the State Medical Association. The next meeting of the society will be held at Jacksonville in May, 1906.

The Louisiana New State Board of Health.—The board was reorganized on January 8, 1906, the old board having resigned in a body. The following appointments were made by Governor Blanchard on January 1st: Dr. C. H. Irion, of Bossier Parish, president; Dr. W. G. Owen, of Iberville Parish, vice-president, and Major W. S. Ingram, secretary and treasurer. Other members are Dr. T. E. Schumpert, of Caddo Parish; Dr. G. W. Gaines, of Madison Parish; Dr. J. S. Perkins, of Calcasieu Parish, and Dr. W. G. Armstrong and Dr. J. M. Batchelor, of Orleans Parish. Elsewhere in this issue of the *Journal* it is announced that a call for a health conference has been made by the president of the board.

A Loving Cup for Dr. Hurd, of Johns Hopkins Hospital.—On Friday, January 26th, the members of the American Medico-Psychological Association presented Dr. Henry M. Hurd, superintendent of Johns Hopkins Hospital, a handsome loving cup in appreciation of his long and faithful service in the affairs of the association. Dr. Charles G. Hill made the presentation address. The committee which selected the cup was composed of Dr. Charles W. Page, of Massachusetts; Dr. P. L. Murphy, of North Carolina, and Dr. C. B. Burr, of Michigan. Among those present were: Dr. E. N. Brush, Dr. J. C. Clark, Dr. J. Percy Wade, Dr. Alfred T. Gundry, Dr. R. Dunton, Dr. Charles Franklin, Dr. J. C. Herring, Dr. H. J. Berkley, Dr. Charles G. Hill.

A State Health Conference in Louisiana.—Dr. C. H. Irion, the newly appointed president of the State Board of Health, has called a State health conference to meet in Alexandria, on February 14 and 15, 1906. This conference is to be broad in its scope and will include every public interest in the State. The principal object of the conference is to devise measures whereby an outbreak of yellow fever in the State in the coming summer shall be rendered impossible. The measures formulated will be along the lines of the transmissibility of the disease by the mosquito. Dr. Irion has invited by personal letter to the Alexandria conference, the Governor of Louisiana; the presidents of all medical, sanitary, dental, and pharmaceutical societies in the State; the health officers and coroners of Louisiana; the Senate and House committee on Public Health and Quarantine of the General Assembly; presidents of the police juries; representatives of the United States Public Health and Marine Hospital Service; representatives of the commercial, transportation, and traveling men's organizations; mayors of cities and towns;

the New Orleans Health Association; the city Board of Health; the State Press Association, and many others.

The Mortality of Baltimore.—The report of the health department for the week ending January 27th, shows a total of 212 deaths, as compared with 208 the corresponding week of last year; 235 in 1904, and 242 in 1903. The annual death rate in one thousand of population was: whole, 18.92; white, 15.27; colored, 38.41. The principal causes of death were:

Typhoid fever.....	1	Cancer.....	9
Whooping cough.....	4	Apoplexy.....	4
Diphtheria.....	2	Heart disease.....	17
Croup.....	1	Bronchitis.....	7
Influenza (grippe).....	3	Pneumonia.....	36
Consumption.....	21	Bright's disease.....	18

The births reported were 89. Forty-four cases of whooping cough were reported during the week, 33 cases of diphtheria, 16 cases of consumption, 18 cases of scarlet fever, and nine of typhoid.

CHICAGO AND THE WEST.

The Academy of Medicine of Southwestern Michigan.

At the annual meeting of this academy, held at Kalamazoo, on January 23, 1906, the election of officers resulted as follows: President, Dr. A. H. Rockwell, Kalamazoo; vice-presidents, Dr. N. A. Williams, Bangor; Dr. A. F. Burroughs, Plainville; secretary and treasurer, Dr. Walter D. Bleyker, Kalamazoo; librarian, Dr. E. H. Van Deusen, Kalamazoo; directors, Dr. G. D. Carnes, South Haven, and Dr. O. H. Clark, Kalamazoo.

Statement of Mortality in Chicago for the Week Ending February 3, 1906, compared with the preceding week and with the corresponding week of 1905. Death rates computed on United States Census Bureau's midyear populations—2,049,185 for 1906—1,990,750 for 1905:

	Feb. 3, 1906.	Jan. 27, 1906.	Feb. 4, 1905.
Total deaths, all causes.....	557	504	530
Annual death rate in 1,000.....	14.16	12.84	13.88
Sexes—			
Males.....	314	286	297
Females.....	243	218	233
Ages—			
Under 1 year of age.....	117	103	114
Between 1 and 5 years of age.....	34	39	58
Between 5 and 20 years of age.....	36	35	36
Between 20 and 60 years of age.....	244	222	218
Over 60 years of age.....	126	105	104
Important causes of death—			
Apoplexy.....	10	15	16
Bright's disease.....	42	39	32
Bronchitis.....	8	9	28
Consumption.....	63	61	67
Cancer.....	31	22	20
Convulsions.....	13	14	11
Diphtheria.....	12	15	13
Heart diseases.....	39	31	33
Influenza.....	8	3	6
Intestinal diseases, acute.....	32	29	23
Measles.....	2	2	5
Nervous diseases.....	29	30	23
Pneumonia.....	103	86	115
Scarlet fever.....	7	4	1
Smallpox.....	..	..	6
Suicide.....	11	6	5
Typhoid fever.....	4	7	3
Violence (other than suicide).....	29	19	31
Whooping cough.....	..	..	7
All other causes.....	115	112	85

GENERAL

A New Medical College at Peking, China.—A new medical college, founded by a union of four Protestant missions and established with the Imperial approval, was to be opened at Peking, on February 1, 1906. It will be known as the Lockhart Medical College.

The Physical Requirements of Military Cadets.—The Surgeon General of the Army has made a recommendation that cadets at the Military Academy be given a rigid physical examination at the end of every year so that the weeding out of physically disqualified cadets may be done throughout the course instead of only at the end of the four years' course. The surgeon general has also recommended that the minimum height for cadets who enter the military academy at seventeen years of age be 5 feet 4 inches, with the condition that when they reach the age of eighteen they must have the minimum height of 5 feet 5 inches. No cadet who has reached the age of eighteen on entrance at the academy will be admitted who is under 5 feet 5 inches in height if the recommendation of Surgeon General O'Reilly is approved.

Pith of Current Literature.

AMERICAN MEDICINE.

February 3, 1906.

1. The Readjustment of Education and Research in Hygiene and Sanitation, By WILLIAM T. SEDGWICK.
2. The Problem of Psychiatry in the Functional Psychoses, By EDWARD COLES.
3. Some Observations on Albumoses in Urine, By WARREN P. ELMER.
4. Röntgen Rays in External Treatment, By M. B. HUTCHINS.
5. The Influence of the Event of the Tuberculous Upon Native Population, By CHARLES FOX GARDINER.

1. **The Readjustment of Education and Research in Hygiene and Sanitation.**—Sedgwick urges that a sharp separation be made between sanitary and hygienic work in research and education, claiming that such a separation exists already in fact, and that its recognition would promote the interests of both branches of general hygiene. He would have sanitation mean chiefly the care of the environment (streets, water, milk supplies, sewerage, etc.), and hygiene chiefly the care of persons or groups of persons (feeding, vaccination, personal hygiene, etc.). The latter would then belong largely to medical men or physiologists, the former to sanitary biologists, chemists, and engineers. He laments the small attention paid to hygiene and sanitation, alike in medical schools and in schools of engineering, and looks for a remedy partly in the better definition and separation of these subjects, and partly in the establishment of permanent, well paid positions for trained men in the public health service, which should at the same time be made more general and less local.

4. **Roentgen Rays in External Treatment.**—Hutchins discusses the mode of action of the rays and the various diseases in which patients have been reported cured or benefited. He especially emphasizes that mild, prolonged, or short strong exposures of the skin or incomplete action of rays may produce epithelioma, and that imperfect and unskillful Röntgen rays exposures can so complicate a case as to render the use of any treatment, or hope of cure, quite vain.

5. **Influence of the Event of the Tuberculous Upon Native Population.**—Gardiner shows that the natives of open resorts for the tuberculous are in a better physiological condition to resist tuberculous infection than the average inhabitants of other towns and cities. All the facts seem to prove that it is better to be daily exposed for years to the germs from the tuberculous in a superior climate than not to be so frequently exposed, but to be under the influence of bad air and overcrowding in an unfavorable climate. The event of the tuberculous among the dwellers in health resorts is not as dangerous a factor as it has been supposed to be. The lesson to be drawn from this is to increase human resistance by proper ventilation day and night, for then the tubercle bacillus will lose its power to infect mankind or destroy life.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

February 1, 1906.

1. The Problem of Psychiatry in the Functional Psychoses, By EDWARD COWLES.
2. The Sanitary Importance of Clean Milk, By CHARLES HARRINGTON.
3. The Results of Operation for the Removal of Cerebral Tumors, By PHILIP COOMBS KNAPP.
4. A Report of Two Cases of Erythema Multiforme Desquamativum, One of Them Complicated by a Purpuric Eruption, with a Discussion of the Underlying Constitutional Conditions, By PHILIP KING BROWN.
2. **The Sanitary Importance of Clean Milk.**—Harrington says that of the many subjects which of late have engrossed the attention of sanitarians and economists, none surpasses in importance these two: the

enormous mortality of infants below the age of one year and the progressively diminishing birth rates obtaining among the intelligent and well to do classes everywhere. In most countries the death rates of children under one year of age are appallingly large. In Germany it is given by Dunbar as 20 per cent.; in England, 27.5 per cent., including the large cities, while without them it is 22.5 per cent. In eight cities of Massachusetts the rate was 18.6 per cent. to 30.47 per cent. When we ask to what these high rates are due, it must be answered that the causes are many and varied; but there is one cause that stands out most prominently, and that is the substitution of artificial, or bottle, feeding for the natural process of suckling. Special attention should, therefore, be paid to the raw milk as an important factor in artificial feeding. Sterilization and Pasteurization injure the biological properties of milk. We should not permit the pollution of milk by excrement, but we should prevent it. We should insist upon clean milk.

3. **The Results of Operation for the Removal of Cerebral Tumors.**—Knapp gives in six very elaborate tables his results of 828 operations for the removal of cerebral tumors. The death rate was 32 per cent. Another table shows that of 828 operations performed 205 patients improved, 186 did not improve, and 265 died. Four hundred and seventy-one growths were removed and 357 were not.

4. **Erythema Multiforme Desquamativum.**—Brown reviews the literature pertaining to this disease, and reports two cases of his own, comparing them with the review Osler gives on his twenty-nine cases: 1. One had gastrointestinal crises, fever, joint, heart, and kidney complications; the other had intestinal disturbance, fever, slight kidney disturbance, angioneurotic oedema, and purpura with hæmorrhages from the mucous membranes. 2. None of Osler's cases had the scarlatiform variety of erythema which seems usually not to be associated with as severe conditions as in these two cases. 3. Digestive manifestations preceded all the attacks in one case and preceded the single attack in the other. Erythemata, as manifestations of serious constitutional conditions, have been reported sporadically for many years. In general, the author says, the underlying conditions may be classed as (a) serious disturbance of nutrition, (b) certain contagious diseases, (c) protozoan infections, (d) evidences of visceral disorders producing toxins as a result either of improper food or imperfect digestion and metabolism, (e) Bright's disease, (f) rheumatism. There is great similarity to scarlet fever.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

February 3, 1906.

1. Leprosy in the Philippines, with an Account of Its Treatment with the X Ray, By H. BROOKMAN WILKINSON.
2. Mosquito Work in Relation to Yellow Fever on the Isthmus of Panama, By W. C. GORGAS.
3. Medical Forgeries, By S. D. VAN METER.
4. The Therapeutical Merits of the Arctic Climate. Meteorological Data of a Summer Cruise, By FREDERICK SAHON.
5. Infantile Pseudoleucæmic Anæmia, By T. GARNET HUNT.
6. The Localization of the Higher Psychical Functions, with Special Reference to the Prefrontal Lobe, By CHARLES K. MILLS and T. H. WEISENBERG.
7. Delayed Chloroform Poisoning and Allied Conditions. A Note on the Cause of the Anatomical and Clinical Changes Observed, By GIDEON WELLS.
8. Chorionepitheliomatous Proliferations in Teratomata, Especially in Those of the Testicle; with Three New Cases (Concluded), By ROBERT T. FRANK.
9. Chronic Acetanilid Poisoning, with Report of a Case Due to Absorption of the Drug from an Ulcer of the Leg, By JAMES B. HERRICK and E. E. IRONS.

1. **Leprosy in the Philippines, with An Account of Its Treatment with X Ray.**—Wilkinson gives a very interesting review of his experience with x rays in the treatment of leprosy. He is inclined to believe that when a local lesion of leprosy is treated with x ray, the organisms there localized are killed and their bodies absorbed by the system thereby producing an immunity against the living organisms. This as may be seen would be practically analogous with the immunization of individuals against bubonic plague by injecting into them killed cultures of plague organisms. In his cases he simply grew the culture of lepra bacilli in the human body as a culture medium and then killed them by the use of the x rays. In support of this theory, he cites the following facts: 1. The treatment of one leprosy spot on a patient produces improvement in spots at a distance from the one actually treated. 2. The cure in the distant spots seems to progress parallel to and to be just as complete as in the one treated. 3. The best results seem to be obtained only when treatment is pushed to the point of killing or beginning to kill the tissues, which would also probably be to the point of killing the organisms. 4. Cases in which there are massive localized leprosy deposits are most rapidly improved. There is an abundance of culture on which to operate and thereby produce immunity more rapidly. 5. In diffuse general involvement of slight degree or atrophic character where there are only a few scattered organisms little success is to be expected. The article is accompanied by very well executed illustrations.

3. **Medical Forgeries.**—Van Meter narrates the histories of several cases of physicians with forged diplomas, reproducing these documents, and says that the natural conclusion to this description of examples of depravity would be an exposition of the means by which the people may protect themselves from the ravages of such medical impostors. It is possible to eradicate them and render their further appearance in society an impossibility, would the public conscience but awake and give heed to their outrages and resort to the strong arm of the State to control the practice of medicine. The establishment by law of a few sensible and obvious regulations for the government of those who hold themselves out to the public as qualified to heal the sick would eliminate from among the physicians this class of criminals now plundering the credulous and dealing death to the feeble and disconsolate who innocently fall into their murderous hands in their aimless search for health. Here there is a grave duty to perform, and it rests heavily on the shoulders of the educated men and women throughout our country.

4. **The Therapeutical Merits of the Arctic Climate. Meteorological Data of a Summer Cruise.**—Sohm compiled records while accompanying the auxiliary vessel of Commander Peary's polar expedition on the steamship *Erik*. He went north for the third time in search of certain information, which perhaps would aid in making these lands accessible to the tuberculous. Professor N. Senn also undertook this journey to complete his investigations of disease among primitive races by a study of the Eskimo in northern Greenland. The author thinks that the merits of the northern climate for the relief of chronic affections, particularly tuberculosis, are threefold: 1. It holds absolutely nothing to add fuel to the existing flame. There is no dust to irritate tissues already struggling against a present mastery of the disease, no superadding of pus or other infections, no contracting of colds to invite a setback, nothing to depress vitality. 2. It holds every incentive to an increase of bodily vigor. Each and every chance and opportunity for a cure which is here sought for and obtained only singly or indifferently is there grouped together in full intensity without the

necessary presence of any disadvantageous element. 3. As a result of this dual combination, a beginning tuberculous process may be checked in the shortest space of time, and not so much local damage will be done while waiting for the tide to turn and recovery to begin. This will lessen the chances of a new infection occurring after a cure. The writer cites such authorities as General Greely, W. S. Champ, Professor Senn, Dr. F. S. Nash, H. L. Bridgeman, and says in conclusion that these northern lands hold distinctive conditions which are precious. Here is a field for a benevolent enterprise, with more surety of practical results than are to be had elsewhere. This field, reported on and indorsed by professional men and others who know whereof they speak, is worthy the attention of those who could begin such an undertaking.

5. **Infantile Pseudoleucæmic Anæmia.**—Hunt thinks that the three conditions of the blood from which this disease must be differentiated are pernicious anæmia, leucæmia, and secondary anæmia with leucocytosis. The diagnosis rests on three factors (a) the clinical history, (b) morphology of the blood, (c) the pathological changes in the viscera. Clinically, the points to be considered are the age of the patient, usually 1 to 4 years; the presence of rachitis or chronic intestinal catarrh, the enlarged spleen, the absence of any other assignable cause for leucocytosis, and the relatively favorable prognosis in this form of anæmia. In regard to the blood changes, the essential features are grave anæmia, uniform and persistent leucocytosis, and lowered hæmoglobin ratio. The tissue changes have not yet been accurately determined. The prognosis depends largely on two factors—the early diagnosis and the ability to procure proper treatment. In neglected cases the outlook is grave. The treatment, as in nearly every other disease of childhood, resolves itself primarily into a question of improving the hygienic surroundings of the patient, and carefully regulating the diet to suit the condition of the stomach and intestines. There is, however, one drug, arsenic, which, if not a specific, has been recommended most highly by the different writers on this subject. It should be administered in the form of Fowler's solution, starting with a minimum dose and gradually increasing to the limit of toleration.

7. **Delayed Chloroform Poisoning and Allied Conditions.**—Wells summarizes his essay in saying that chloroform poisoning, in common with a number of closely related conditions characterized by intoxication and marked changes in the liver (acute yellow atrophy, phosphorus poisoning, certain septicæmias, and some cases of puerperal eclampsia) probably all depend on the effect on the liver of poisons that destroy the synthetic functions of the liver cells without destroying their autolytic ferments. Autolysis of the liver cells follows, with resulting alterations in the liver structure, and the appearance of products of autolysis (amido acids and various other organic acids) in the blood and urine. It is probable that in chloroform and in phosphorus poisoning, at least, it is the oxidizing enzymes that are particularly involved, accounting for the marked fatty changes that are present in these conditions.

9. **Chronic Acetanilid Poisoning.**—Herrick and Irons advise the gradual withdrawal of the acetanilid in the treatment of the chronic poisoning. Temporary substitution of codeine for pains or sleeplessness and the use of tonics will result in recovery. Attention to the stomach and bowels is important, as on good digestion largely depends the power of blood repair and the return of weight and strength. Much can be done in the way of suggestive treatment by sympathy and encouragement. Even in the most desperate cases, therefore, one may give a fairly hopeful prognosis.

MEDICAL RECORD.

February 3, 1906.

1. Clean Air, By T. MITCHELL PRUDDEN.
2. What Constitutes Pneumonia, By ANDREW H. SMITH.
3. Danger and Protection in X Ray Work, By W. LEHMANN.
4. Trachoma in Children, By C. COLE BRADLEY.
5. Two Cases of Pseudoleucæmic Anæmia of Infancy, By E. MATHER SILL.
6. Air De Luxe, By W. P. NORTHROP.

1. Clean Air.—Prudden says that from the beginning to the end of his life three things man must have, whatever else he may lack: Air, water, and food; and of air the author is speaking in this paper. If, the author states, in New York the beneficent law against the smoke pollution of the air were enforced; if the streets were properly cleaned; if the great passenger transport systems were placed under competent sanitary supervision; if the health department were persistently alert in enforcing the ordinance of the sanitary code which relates to spitting in public places; and if we could get sweeping and dusting indoors intelligently done, we should have in this city a fair outlook towards a great advance in the reduction of diseases of the respiratory organs. These are large and difficult "ifs," and they do not appeal as strongly to the public as does the search for a new serum. The infectious diseases of the respiratory organs are steadily increasing, as people are more and more huddled together in offices, dwellings, travelling conveyances, and places of public assemblage. A large part of these diseases are directly traceable to infectious malarial cast off.

2. What Constitutes Pneumonia.—Smith is of the opinion that the fever thermometer is a more sensitive instrument in diagnosing and treating pneumonia than the stethoscope. A single pneumococcus lodged in an air cell and causing there its specific irritation and consequent exudation presents all the essentials of the disease which may then be called a monococcal. Or if later the bronchiole terminating in the lobule invaded becomes blocked and the further spread is prevented, it may be unilobular pneumonia. Such abortive attacks are in the author's opinion very common.

4. Trachoma in Children.—Trachoma in children, says Bradley, has occupied a prominent position in the public eye during the past two years, and has at last been recognized by the Board of Health of New York as a decided enemy to be fought as strenuously as the other contagious diseases of childhood. Two forms are met with, acute and chronic. In acute form the symptoms are very similar to those of a purulent ophthalmia. In chronic condition there will follow a slow formation of cicatricial tissue with its consequent contraction, vascularization of the cornea, with its diminution or even destruction of vision; iritis occasionally occurs, while entropion, trichiasis, and xerosis of the conjunctiva may be sequelæ. The general use of copper sulphate is not altogether harmless, while a one per cent. solution of mercuric chloride is harmless and is equally good in its curative results. Copper citrate is apparently harmless, and is devoid of the objectionable features of copper sulphate. General anæsthesia is unnecessary, cocaine hydrochlorate, in solid form, answering every requirement.

5. Two Cases of Pseudoleucæmic Anæmia of Infancy.—Sill reports two cases of pseudoleucæmic anæmia. One baby died while the other seemed to improve. Its treatment was a proper diet, cod liver oil, and Fowler's solution. With the x ray, which is said to have been used with marked benefit and some cures, the author had no experience. Holding and Warren have collected twenty-two cases treated this way, 27 per cent. being symptomatically cured, 59 per cent. improved, and 14 per cent. unimproved or fatal.

From these statistics x ray treatment seems to have been successful.

BRITISH MEDICAL JOURNAL

January 20, 1906.

1. The Treatment of Arteriosclerosis, By Sir J. BARR.
2. The Significance of Small Quantities of Sugar and Albumin in the Urine, By R. W. BURNET.
3. Clinical Estimation of Purin Bodies in Gouty Urines, By I. W. HALL.
4. On Chemotaxis, By J. O. W. BARRATT.
5. The Diagnostic Value of X Rays, By J. M. DAVIDSON.
6. Lead Poisoning from Electrolysis of Water Pipes, By G. A. E. ROBERTS.
7. The Action of Trypsin Upon the Living Cells of Jensen's Mouse Tumor. A Preliminary Note Upon a Research Made (with a Grant from the Carnegie Trust), By J. BEARD.

1. Arteriosclerosis.—Barr states that the most potent disease in the production of arterial degeneration is syphilis. Typhoid fever plays a considerable part in the induction of the disease, as do acute rheumatism, diphtheria, septicæmia, influenza, malaria, etc. The writer has for some time suspected the toxine of the colon bacillus as being an important factor; examination of the blood of arteriosclerotics shows that in 55 per cent. of the cases it gave complete agglutination with the colon bacillus, as compared with only 20 per cent. with the blood from persons free from arteriosclerosis. Among mineral poisons lead must be mentioned, as having a direct action on the bloodvessels and kidneys. High arterial tension being the precursor of arteriosclerosis, all pressor agents such as coffee, tea, digitalis must be looked on as playing a part in the causation of the disease. Although alcohol is credited as one of the most potent factors in arteriosclerosis, it really has but little to do with it, except as it leads to the production of gout. The excessive use of nitrogenous foods kills more adult men than alcohol—the mischief being due to the waste products. The disease is essentially one of late adult life, and differs from senile vascular degeneration; it is much more common in men than in women, they suffering more frequently from syphilis, having more mental worry, and being subjected to more physical strain. Repeated pregnancies often lead to the disease. Long continued exposure to cold leads to degenerative changes in the peripheral vessels. American men, as a race, are especially prone to the disease. The diet is of the greatest importance; it should be of low proteid value, as adults perform their muscular work with carbohydrates. How to eat is as important as what to eat. One should never eat until he has an appetite, then eat slowly, masticate thoroughly, and never eat to repletion. Exercise is of the greatest importance; so long as the exercise is not excessive for the individual, the more one gets out of doors the better. A course of baths often does much good. The author rarely prescribes digestive agents or hypnotics; failure to eat or sleep requires treatment, not palliation. The thyroid preparations are extremely useful, and iodine is often even more valuable. The latter is best given, as tincture or syrup of iodine. Adrenalin and the chlorides are pressor agents and should never be given alone. Nitrites are useful in emergencies, but their effects are too evanescent for continued use. The benzoates frequently give excellent results, especially where the kidneys are involved.

2. Albuminuria and Glycosuria.—Burnet states that the presence of albumin in any appreciable amount in the urine is not normal or physiological, but that it does not necessarily imply coarse pathological change. The presence of sugar in the urine in any appreciable quantity is abnormal, in the young it is of serious import, and if persistent it is likely to lead on to diabetes. In people past middle life and especially in those of gouty type, it is of less consequence and usually yields to

treatment more or less speedily, to recur, however, in some cases, under conditions similar to those under which it first appeared. The presence of both sugar and albumin in the urine indicates serious disturbance in the metabolic processes, calling for relief to the nervous strain which the patient may have been undergoing, and an adjustment as far as can be of his environment, but under favorable conditions these patients may continue in at least fair average health for many years.

4. **Chemiotaxis.**—Barratt summarizes his observations on chemiotaxis as follows: 1. Paramœcia pass readily into tubes containing acid and alkaline solutions of sublethal concentration, but pass still more readily into control tubes containing the same liquid as that in which the paramœcia are immersed. 2. Only negative chemiotaxis appears to be exerted by acids and alkalies upon paramœcia. This negative chemiotaxis is marked in alkaline solutions of lethal concentration, and is slighter in acid solutions of lethal concentration. 3. There is no parallelism between (a) the lethal concentration of acids and alkalies for paramœcia, and (b) the chemiotaxis of paramœcia in respect of acids and alkalies. 4. The taxis of paramœcia is modified when these organisms are transferred from hay infusion to distilled water. 5. Chemiotaxis is not to be explained simply by reference to the acidity or alkalinity of the solutions employed. Mere change of concentration is an important factor in its production. 6. Negative chemiotaxis does not necessarily indicate that the liquid tested acts injuriously upon the organisms employed.

6. **Lead Poisoning from Electrolysis.**—Roberts reports a case of lead poisoning, caused by water used for drinking purposes, it containing 0.14 grains of lead to the gallon. On investigation it was found that the water was supplied through a lead pipe, the interior of which showed patches of lead carbonate, due to electrolysis. The lead pipe was crossed by an electric cable passing about eighteen inches above it. At this point in the cable there was a leak of 1.8 volts, sufficient to cause the electrolysis.

7. **Trypsin and Cancer.**—Beard's experiments were undertaken to determine the action of trypsin upon the living cells of a carcinoma. To this end mice suffering from Jensen's mouse tumor were injected with suitable amounts of trypsin. On killing the mice every single tumor cell was found to be in degeneration. The somatic tissues (leucocytes and connective tissue stroma cells) were quite normal. It appears to be certain that the action of trypsin upon the cancer cell is to pull down the cancer albumin—a living substance—and the cancer ferment (malignin) produced by this. In addition to their confirmation of the conclusion that trypsin is the substance which will destroy the cancer cell with ease and without danger to the individual, these experiments go far to prove that in its nature cancer is neither germinal nor somatic, for trypsin, the architect of the soma, does not in life destroy the soma or sexual individual or its sexual products, whilst its action is direct and utterly ruinous upon trophoblast or asexual generation.

LANCET.

January 20, 1906.

1. The Practical Diagnosis of Diseases of the Skin,
By W. EVANS.
2. Bradycardia and Cardiac Arrhythmia Produced by Depression of Certain of the Functions of the Heart,
By J. HAY.
3. On the Relief of Certain Headaches by the Administration of One of the Salts of Calcium,
By G. W. ROSS.
4. Remarks Upon the Surgery of the Common Bile Ducts,
By B. G. A. MOYNIHAN.
5. Primary Pneumococcus Peritonitis,
By W. C. G. ASHDOWNE.

6. Necrosis of the Entire Renal Cortex of Both Kidneys,
By H. C. LLOYD.
7. A Case of Acute Hæmorrhagic Pancreatitis,
By G. R. JEFFREY.
8. A Case of Volvulus of the Ascending and Transverse Colon, with Unusual Complication, By J. PHILLIPS.

1. **Diseases of the Skin.**—Evans states that the reason so many diseases of the skin are recognized is because so many slight differences are readily and easily distinguished. In distinction from morbid conditions of other parts and organs, every stage of the process can be watched. The first point of importance in the diagnosis is to identify the primary lesion. This can best be done at the margin of a patch of the eruption where the primary lesion is apt to be least modified. When the primary lesion has been identified, its other characters must be examined. The situation of the disease must always be taken into consideration. The distribution of nerves is of great assistance. In an eruption of an unusual type and of recent origin, some internal or external poison should always be thought of. The iodides and bromides are the greatest offenders. The possibility of a lesion of the skin being factitious should always be borne in mind. The chief characteristics of such eruptions are: They usually occur in girls or young women; if the patient is right handed the lesions are most likely to be found on the left forearm and the right leg; and the lesions are generally longer in the long axis of the limb and often have square ends. The effect of treatment is often of value in diagnosis; *e. g.*, in syphilis. In the skin we have an additional agent in diagnosis which can hardly be employed elsewhere, the removal and microscopical examination during life of a portion of the lesion.

2. **Bradycardia.**—Hay reports the case of a man, aged sixty-five years, suffering from bradycardia alternating with arrhythmia. The bradycardia was due to heart block. When the patient was first seen the block was caused by depression of conductivity; later the conductivity became practically normal and the block which persisted was found to be due to depression of excitability. No similar case has been recorded. The action of atropine was to increase the frequency of the stimulus production, but had no influence on the power of conductivity. Sounds were heard during the diastolic phase of the ventricles. The depression of conductivity and excitability of the myocardium was probably due to impaired metabolism, secondary to an insufficient blood supply, the result of arteriosclerosis changes in the coronary arteries.

3. **Cure of Certain Headaches.**—Ross states that there occurs frequently in women and occasionally in men, a type of headache presenting the following characteristics: 1. It is present and most severe on waking, tending to diminish from then on. 2. It is usually a dull ache or a frontal or temporal throbbing. Infrequently it is neuralgic. 3. In its most typical form it is exceedingly chronic, often of several years' duration and most intractable. 4. It is associated with deficient coagulability of the blood. The subjects are usually of the lymphatic type, the face being full, and the expression listless. Among the other symptoms may be mentioned anorexia, nausea, constipation, cough, dyspnœa, cardiac palpitation, amenorrhœa, menorrhagia, or dysmenorrhœa. Also chilblains, urticaria, and œdema. Based on the presence of these three last symptoms and the diminished coagulability of the blood, the author holds these headaches to be due to "serous hæmorrhages"—*i. e.*, transudation of the plasma from the bloodvessels to the lymph spaces (of the brain?). This new theory is borne out by the fact that the administration of a calcium salt, the action of which would be to increase the blood's coagulability, is followed in nearly all cases by complete relief not only of the headache, but also of many of

the associated symptoms. Fifteen grains of the lactate of calcium should be given three times a day before meals. The mode of treatment might possibly be further applied in neuralgias accompanied by deficient coagulability of the blood, and in migraine.

4. Surgery of Common Bile Duct.—Moynihan first discusses the anatomy of the common bile duct, and the variations in its form which occur. The conditions in which surgical interference is called for, are: (1) Rupture of the duct; (2) calculus and inflammatory conditions caused by other agents; (3) stricture; (4) new growth; and (5) pressure upon the duct from without. The operations performed are choledochotomy, choledochostomy, choledochectomy, choledochoplasty, and choledochointerostomy.

5. Pneumococcus Peritonitis.—Ashdowne reports a case of acute peritonitis due to a primary infection by the diplococcus pneumoniae occurring in a married woman aged twenty-nine years. The autopsy revealed a general peritonitis, with a considerable quantity of blood stained fluid in the peritonæum. The writer has collected thirty-one cases of pneumococcus peritonitis from the literature. Of these twenty-three were general or diffused, there being affections of the stomach in five, a perforating ulcer in three, and a chronic ulcer and carcinoma in one each. The appendix was affected in three cases, four were alcoholic subjects, in one there was a ruptured pyosalpinx, in four pleurisy, and in one empyema. Of the twenty-three cases eight were operated on. Nineteen died and four recovered. Of the eight cases of circumscribed pneumococcus peritonitis, all were operated on and seven recovered. The one fatal case was complicated by pneumonia and endocarditis. As regards the diagnosis, the chief points which distinguish it from other forms of peritonitis are the diarrhoea, the great mental excitement, and the odorless character of the pus. The diagnosis eventually rests upon the examination of the exudate by the microscope, by cultures, and by animal inoculation.

LYON MEDICAL.

January 7, 1906.

1. Recent Advances of Biology in the Domain of Intestinal Chemism, By L. HUGOUNENQ.
2. Heliotherapy in a Tuberculous Lesion of the Larynx, By M. COLLET.

1. Recent Advances of Biology in the Domain of Intestinal Chemism.—Hugounenq commences in this number a review of the advances made in this subject of late. He gives great credit to the works of Pawlow and his followers, Starling and Bayliss, of England; Delezenne, Gley, and Camus, of France, in experimental physiology, by which have been demonstrated the collaboration of the various intestinal secretions in the phenomena of digestion and the dependence of intestinal activity on psychical conditions. The results obtained by these and other investigators are woven together so as to present in detail what is now known in regard to this subject.

2. Heliotherapy in a Tuberculous Lesion of the Larynx.—Collet reports a case of great infiltration of the epiglottis, aritenoids, and laryngeal mucous membrane in a man, 33 years of age, which progressively retrograded under the influence of heliotherapy until at the end of eight months a nearly normal condition had been obtained. Two questions could not be answered positively, whether the improvement was due to the heliotherapy, to the general treatment, or to spontaneous recovery, and whether the lesion was in reality tuberculous. The author shows by exclusion that the lesion was in all probability tuberculous, and he believes that the heliotherapy was in a large degree responsible for the improvement.

PRESSE MEDICALE.

January 6, 1906.

1. Albuminuria of Pregnancy, By V. WALLICH.
2. Day Nurseries, By H. MERY.
3. Active Immunization of Young Cattle Against Tuberculosis by the Method of Behring, By M. C. GUERIN.

1. Albuminuria of Pregnancy.—Wallich urges that the presence of albuminuria in pregnancy does not always indicate the existence of Bright's disease and that the character of all the urine passed during twenty-four hours should be noted in each case, in order that eventually a means of differentiation may be obtained between the various conditions which produce albuminuria during pregnancy.

3. Active Immunization of Young Cattle Against Tuberculosis.—Guerin considers von Behring's method of vaccinating young cattle to be less dangerous and more efficacious than other methods.

January 10, 1906.

1. The Recent Epidemic of Cholera in Germany and its Indications, By A. CHANTEMESTE and F. BOREL.
2. Eggs of Parasites Simulated by Pollen in Fæcal Matter, By A. CHAUFFARD.
3. The Spirochæta Pallida in the Blood of Syphilitics, By L. NATTAN-LARRIER and ANDRE BERGERON.
4. Tabes and Orthopædic Surgery, By R. ROMME.
5. Rational Use of Farina in Infant Feeding, By ALFRED MARTINET.

1. The Recent Epidemic of Cholera in Germany.—Chantemeste and Borel follow the course of the epidemic of 1905 from Astrakan through Russia and Germany, and describe the measures taken in the latter country to check its progress. In spite of the efforts made in the way of sanitary defense the disease penetrated Germany along the navigable water course.

2. Eggs of Parasites Simulated by Pollen.—Chauffard describes a number of ovoid bodies which he found in fæcal matter, which did not resemble the eggs of any known parasite. They proved to be grains of pollen from a coniferous plant.

3. The Spirochæta Pallida in the Blood of Syphilitics.—Nattan-Larrier and Bergeron add three cases to the number already published which seem to indicate positively that the blood of syphilitics in the secondary stage who have not undergone treatment contains the spirochæta pallida of Schaudinn.

4. Tabes and Orthopædic Surgery.—Romme presents the views which were advanced by Dr. Schwab, of St. Louis, and Dr. Allison, of Washington, last year with regard to the possibility of the correction and amelioration of the course of tabes by the use of proper orthopædic apparatus.

SEMAINE MEDICALE.

January 10, 1906.

1. Lithiasis of the Common Bile Duct, By A. CHAUFFARD.
2. The Reflexes of the Pupil, By E. VENNEMAN.

1. Lithiasis of the Common Bile Duct.—Chauffard reports two cases. One patient, a man 28 years of age, after several attacks of biliary colic, had a cylindrical calculus which weighed nine grammes removed from his common bile duct. The other patient after suffering severely and for a long time from biliary colic underwent the same operation; two calculi were removed, one large and cigar shaped, the other small.

2. The Reflexes of the Pupil.—Venneman states that there are no simple pupillary reflexes in the human eye, although there do exist many coordinate intra-ocular movements which vary according to the manner in which the eye is used and correspond to the physiological functions of vision, accommodation, and regulation of the quantity of light to be permitted to enter the eye.

BERLINER KLINISCHE WOCHENSCHRIFT.

January 8, 1906.

1. Apparent Anticomplementary Action of Precipitating Sera in Animals, By R. PFEIFFER and C. MORESCHI.

2. Experimental Contributions to the Study of Tumors,
By APOLANT, EHRLICH and HAALAND.
3. Influence of Mineral Waters Upon Gastric Secretion,
By A. BICKEL.
4. Diagnostic Abdominal Puncture, By H. SALOMON.
5. Course of Sensation in the Spinal Cord,
By M. ROTHMANN.
6. Physiology and Pathology of Respiratory Movements,
By H. GUTSMANN.
7. Preparation of Dysentery Toxine, By H. LUEDKE.
8. Diffuse Purulent Peritonitis, By B. BOSSE.

1. **Precipitines.**—Pfeiffer and Moreschi conclude that specific precipitating sera show a decided antibacteriolytic action when they meet, in the body, appropriate precipitogenic substances. This is accomplished by the fixation of the complement. That precipitate is the most powerful which either destroys the complement or draws it to itself in powerful combination.

2. **Tumors.**—Apolant, Ehrlich, and Haaland consider the development of sarcomata from the carcinoma of mice. In three instances the development of a sarcoma was observed from carcinoma inoculations which had been carried on for several generations. The histological changes are such as have also been observed in man, and show conclusively that the process is not dependent upon inflammatory processes, but represents actual tumor growth. The change cannot be one from carcinoma to sarcoma cells, but undoubtedly represents an irritation of primal origin. Haaland inoculated mice with warmed material from a mixed tumor, and found a decided diminution in the growth of the inoculated tumor. The sarcomatous tissue showed a considerable mixture of giant cells.

4. **Diagnostic Puncture.**—Salomon employs a sharp needle in a blunt canula for puncture of the abdomen. After the withdrawal of the needle, a small catheter is inserted through which the fluid is withdrawn for examination.

8. **Diffuse Purulent Peritonitis.**—Bosse asserts that timely operation is still the best prophylactic measure against peritonitis. He reports twelve patients with purulent peritonitis, of whom all died except one, a two year old child, in spite of all possible surgical and medical measures. The author says that the specific sera have not yet accomplished much. Credé's silver salts have been of some use, especially enemata of one to 100 solution of itrol, repeated twice daily. Infusion of normal saline solution is useful and an important adjuvant to treatment. The intraabdominal employment of poisons or antiseptics is warned against, and the author utters a caution against the use of opium which can bring about an apparent improvement.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT

January 16, 1906.

1. Pyelography, By F. VÖLCKER and A. LICHTENBERG.
2. Stones in the Ductus Choledochus, By H. EHRET.
3. Digalene, By K. GRASSMANN.
4. Examination of the Stomach and Intestines by the Röntgen Ray, By H. RIEDER.
5. Treatment of Supracondylar Fractures of the Humerus with Bardenheuer's Extension Apparatus, By SCHRECKER.
6. Claim, By LABHARDT.
7. Purulent Collections in Douglas's Cul de Sac, By R. MORIAN.
8. The Origin of Tumors, By RITTER.

1. **Pyelography.**—Völcker and Lichtenberg pass a ureteral catheter carefully into the pelvis of the kidney and then inject a warm five per cent. solution of collargal solution through the catheter. By the Röntgen ray the form of the pelvis and meter could be easily made out. After the exposure the pelvis is washed with a warm boracic acid solution and the catheter withdrawn. The authors believe the method useful for the diagnosis of dilatation, kinks and dis-

placements of the renal pelvis and ureter, and of anomalies and tumors of the kidney.

2. **Choledochus Stones.**—Ehret says that gallstones confined to the ductus choledochus evoke three characteristic symptoms: 1, High temperature; 2, the presence of jaundice; 3, the absence of pain in the hepatic region. He narrates two cases in which the diagnosis was confirmed by operation.

7. **Pus Collections in Douglas's Cul de Sac.**—Morian summarizes as follows: Pus collections in the cul de sac of Douglas are usually part of a general peritonitis most frequently originating in the appendix. They arise from the exudation of serous effusion loaded with bacteria from the appendix into the cul de sac. They usually develop about a week after the attack of appendicitis, and have little influence upon the pulse or temperature. They can be recognized by signs of pressure and inflammation about the rectum. The author recommends emptying the abscess as soon as the diagnosis is made by an incision through the anterior rectal wall. Perineal and parasacral incisions are the best for inflammations of the pelvis and the pelvic connective tissue.

ZENTRALBLATT FUER CHIRURGIE.

January 13, 1906.

1. Resection of the Shoulder Joint, By A. CATERINA.
2. Intestinal Obstruction Due to Gallstones, By F. FINK.

1. **Resection of the Shoulder Joint.**—Catterina says that a rational method for this operation must include: 1, Safety, so that no important vessels or nerves shall be injured; 2, ease of execution; 3, vision of all exposed portions of the joint; 4, practicability for all cases. He then describes an operation of his device by which the outer third of the clavicle is temporarily resected so that the deltoid muscle and the circumflex nerve shall be avoided, and simultaneously operative space is gained. The method is very easy, not dangerous, and is applicable to all cases, especially to those of old anterior luxation of the humerus. Bleeding is minimal.

ZENTRALBLATT FUER GYNAEKOLOGIE.

January 13, 1906.

1. Sarcoclastic Acid in the Cerebrospinal Fluid of Eclampsics, By H. FUERTH and G. LOCKEMANN.
2. A Rare Indication for Cæsarean Section, By BRUNET.
3. Loss of Uterine Tone During Curettage, By C. VON TUSSENBROEK.
4. Birth in a Double Bicorned Uterus with a Vaginal Septum, By F. STÄHLER.

2. **Cæsarean Section.**—Brunet reports the case of a nineteen year old primipara who, at term, had two severe hæmorrhages from a large varix of the anterior vaginal wall. The entire vagina was the seat of marked varices. The vagina was tamponed, as ligature could not be undertaken on account of the friability of the vaginal tissues. As soon as the tampon was removed, fresh hæmorrhage began and labor pains started. Three days later, Cæsarean section was done, as it was feared a forced delivery would terminate fatally from hæmorrhage from the vagina. Mother and child recovered.

3. **Atony of the Uterus.**—Von Tussenbroek repeats her assertion that the loss of muscular tone in the uterus during curettage is found only during this operation, and refers it to a disturbance in the reflex inhibitory due to the scraping. The anæsthesia plays no rôle, and as evidence of this, she mentions the contractility of the uterus after labor terminated in narcosis and the conduct of the uterine muscle during abdominal operations.

ROUSSKY VRATCH

December 17, 1905.

1. The Presence of Casts and Cylindroids in Normal Urine, and Their Significance,

By P. I. PHILOSOFOFF.

2. Observations of a Surgeon During the Russo-Japanese War, By R. R. VRADEN.
3. Influence of the Animal Organism Upon the Properties of the Streptococcus: Biochemical Properties, By A. DVUZHILNY.
4. The Hygiene of Tuberculous Patients, By N. F. TCHIGAYEFF.

1. **Casts and Cylindroids in Normal Urine.**—Philosoff studies the occurrence of casts and cast like formations in normal urine, with special reference to their significance. Until recently casts have been considered essentially as pathological elements of the urine. Within the past few years, however, various observations began to point to the occurrence of casts in normal urine under special conditions, such as under the influence of exercise, alcohol, etc. In an article published during the year 1904, Klieneberger and Oxenius declared that they found casts in 89.24 per cent. among 93 apparently perfectly healthy young persons. Of these, 75.26 per cent. showed hyaline casts, 4.3 per cent. granular casts, and 4.3 per cent. epithelial casts, while 58.06 per cent. of these individuals showed the presence of albumin. The authors mentioned assumed that these apparently pathological elements in the urine were derived from infectious diseases which these persons had undergone. Philosoff, continuing this line of research, examined 50 young men in apparently perfect health, in whose history there was no alcoholism, no acute nephritis, and whose urine contained no albumin in the clinical sense. In 52 per cent. of these persons cast like formations were seen, of which 34 per cent. were hyaline and 24 per cent. granular, while 26 per cent. were seen to have hyaline cylindroids. In 16 per cent. of cases all three types were observed. It seemed, therefore, that healthy young men who had never had a disease of the kidneys, and whose diet had been exemplary, normally exhibited casts in the urine. In order to determine the relation between the ingestion of spices and other condiments which might irritate the kidney, and the appearance of casts in the urine under apparently normal conditions, Philosoff experimented on four individuals to whom he gave pepper, onions, mustard, and small doses of alcohol and turpentine. The results of these experiments showed that the ingestion of these substances was followed by an increase in the various casts and cellular elements in the urine. It seems, therefore, that in these cases an increase of the physiological condition was produced by the irritant foods rather than the appearance of a pathological condition. The origin of both hyaline casts and cylindroids is apparently identical, and when hyaline cylindroids are present in large numbers they also are pathological. There is no doubt in the author's mind that the appearance of casts in limited numbers is a purely physiological phenomenon.

2. **Surgical Notes of the Russo-Japanese War.**—Vraden says that in the present conditions of warfare surgical aid on the field of battle is practically out of the question. Under the shower of projectiles in the firing line there can only be self help and mutual help, so far as the soldiers are concerned. The first aid packet now supplied to each soldier has proved of the greatest benefit in the war, but of course, this packet is small and can only be used for comparatively simple injuries. The packet, as given now, is antiseptic rather than aseptic, and this is correct, because it is applied under the most adverse conditions; with dirty hands, amidst clouds of dust, upon a dirty skin, and may be left in place for an indefinite time. The removal of the wounded and their subsequent fate depends largely upon the issue of the battle, and the removal of the wounded during the battle is a process devoid of humanity and of sense. It is better, therefore, to allow the lightly wounded to leave the ranks as best they can, seeking the cover of the nearest bandaging sta-

tion, while the severely wounded must have their fate decided by the issue of the battle.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE

January 7, 1906.

1. Contribution to the Study of the Nervous Complications of Typhoid in Infancy, By G. B. ALLARIA.
2. A Clinical Note on a Case of Chronic Spasm in the Region of the Accessory Nerve of Willis, Due to Malaria, By ANDREA CONTI.
3. The Clinical Significance of Œdemata, By TORRENDO SILVESTRI.
4. The Influence of Adrenalin Anæmia Upon the Course of Local Infections, By DARIO MARAGLIANO.
5. Experimental Researches Upon Syphilis, By FRANCESCO SIMONELLI and IVO BANDI.
6. How to Obviate the Unpleasant Effect of a Protracted Treatment with Bromides, By C. S. MATERAZZI.
7. The Therapeutical Value of Ether Compresses in the Treatment of Strangulated Hernias, By EGISTO CURTI.

3. **Significance of Œdemas.**—Silvestri discusses the meaning of œdemas. The transudation of serum into the bronchi, the intestines, etc., in these conditions is analogous, according to Cantani and others, to the transudation of fluid into the closed cavities and the subcutaneous tissue. Œdema, according to Silvestri, should not be considered as a symptom, but as a means of defense of the system which paradoxically may in itself be injurious. The ideal treatment of œdemas is derivation through the intestine, both in superficial œdemas and in dropsy. In applying this treatment we simply follow the way pointed out by nature. This view is contrary to that of Taruella and others who regard œdemas as signs of functional decline of the organism. It is true that in chronic disease of the kidneys or of the heart the appearance of dropsy and œdema are signs of the decline of the defensive powers of the organism, but Taruella is wrong when he says that the deposit of serous fluid containing poisons is purely a passive phenomenon, because if this were so, the amount of œdema would always be proportionate to that of renal retention or to the degree of obstruction in the circulation.

5. **Experimental Researches Upon Syphilis.**—Simonelli and Bandi inoculated a young female ape of the genus *Semnopithecus* with material obtained from a perianal hypertrophic papule from a syphilitic. On the twenty-fourth day after inoculation a dark red lenticular papule, surrounded by a faint area of congestion, was found at the site of inoculation. The lymph nodes behind the ears and in the neck were slightly enlarged, but free from pain. Two days later there was a superficial erosion at the site of the papule, which gradually became indurated at its base. On the twenty-seventh day the typical characters of chancre were recognized in the lesions which appeared over both orbits, the animal losing its vivacity and became markedly emaciated. During the following week the glands diminished in size, and a month later the chancre had progressed fairly well towards healing. An examination of the material scraped from these lesions failed to reveal the spirochæta pallida. The authors found, however, within the swollen cells certain masses of very delicate thread like elements, some of which were straight, while others were wavy. These were similar to the structures which the authors found in scrapings from papules of patients with secondary syphilis. They do not attempt to say whether these peculiar organisms are agglutinated spirilla or are transition forms of the spirochæta of Schaudinn and Hoffmann.

ARCHIVES OF THE ROENTGEN RAY.

January, 1906.

1. On the Diagnostic Value of the Röntgen Ray for the Soft Organs of the Body. By ERNEST KINGSCOTE.
2. The Exploration of the Thorax by Orthodiagraphy (Continued), By H. GUILLEMINOT.

3. A Report of the General Utility of High-Frequency Currents (*Continued*), By H. E. GAMLEN.
4. The Cooper Hewitt Mercury Vapor Lamp and Valve (*Continued*), By MAURICE LEBLANC.
5. The "Gyration" Physical Exercise, By HORACE MANDERS.
6. Notes on X Light (*Continued*), By WILLIAM ROLLINS.

1. **On the Diagnostic Value of the Roentgen Ray for the Soft Organs of the Body.**—Kingscote reports a case which had been successively diagnosticated as one of aneurysm, new growth, and floating kidney. A skiagraph revealed the dilated heart pushing the diaphragm downwards towards the umbilicus in a wedge shaped depression, and the organ appeared to be dragging on the ascending aorta, which assumed the appearance of a constricted gourd.

5. **The "Gyration" Physical Exercise.**—Manders describes a new physical exercise, designed in order to develop and bring into habitual action the more important muscles of the economy which are apportioned to control the intricate movements of the spinal column and maintain its due position and equilibrium; also those muscles which are attached to the walls of the great cavities of the chest and abdomen, and which form part of their enclosures.

6. **Notes on X Light.**—Rollins remarks that the beta radium rays are not homogeneous, and have different penetrating powers. This should be remembered in using them in therapeutics. The least penetrating should be employed for the most superficial diseases, and the more penetrating for treating those somewhat deeper. As the beta rays when immersed in electrically or magnetically polarized ether are deflected in varying degrees, the same apparatus recommended in an earlier note for removing and converting the gamma rays may be employed, the opening through which the rays emerge being arranged to allow only those rays to escape whose penetrating power is suited to the position of the disease.

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

January, 1906.

1. On the Influence of Light in the Production of Cancer of the Skin, By J. N. HYDE.
2. A New Method of Operating on Dupuytren's Contraction of the Palmar Fascia, By W. W. KEEN.
3. The Success which Attends the Operation of Cataract Extraction, By S. THEOBALD.
4. Fever in Chronic Endocarditis, By J. S. THACHER.
5. On the Use of Opium in Myocarditis, Weak Heart, and Dilated Heart, By J. H. MUSSEN.
6. Cases of Disease of the Heart Muscle, By T. B. BANINGER, JR.
7. Classification of the Cases Heretofore Called Rheumatoid Arthritis, By P. W. NATHAN.
8. Rheumatism of the Stomach with Hæmatemeses of Uncertain Origin, By H. ILLOWAY.
9. An Extraordinary Case of Anthracosis Simulating Thoracic Aneurism, By H. SEWALL.
10. Enteric and Mesenteric Cysts, with Report of an Unusual Case, By J. C. AYER.
11. Report on the Action of Various Substances on Pure Cultures of the *Amœba Dysenteriae*, By J. B. THOMAS.
12. Pyelonephritis of Pregnancy, By C. G. CUMSTON.
13. Tumor of the Cauda Equina, By F. SCHMOLL.
14. The Spirochetæ Found in Syphilis, By R. C. ROSENBERGER.

1. **Influence of Light in the Production of Cancer.**—Hyde's conclusions are as follows: 1. The skin of the human body is, in some instances, hypersensitive to the action of the actinic rays of the spectrum. 2. This hypersensitiveness may result in hyperæmia, pigmentation, telangiectasis, atrophy, hyperkeratosis, or cancerosis of the skin, or by all of them, at times in a determined order of succession. 3. In the form of childhood cancerosis, which is known as xeroderma pigmentosum, the pigmentation, telangiectasis, atrophy, hyperkeratosis, and cancerosis of the skin resulting from

exposure to rays of light, are exhibited early in life, though in rare instances. 4. The above mentioned conditions are more common in adults, especially after the middle period of life. 5. Physiological pigmentation of the skin in the colored races furnishes relative immunity to cancerosis of that tissue. 6. Colored races also suffer less frequently than whites from cancer of other portions of the body. This relative immunity may be due to protection from actinic rays of light furnished by the pigment of the integument.

2. **Dupuytren's Contraction of the Palmar Fascia.**—Keen operated in a recurrent case of this annoying condition by removing the entire palmar fascia. The skin and underlying fascia were all dissected away from the palm in a square flap, and the hardened fascia then dissected away from the flap. Healing occurred by first intention, with normal motion of the fingers following. Whether recurrence will take place is as yet too early to decide.

4. **Fever in Chronic Endocarditis.**—Thacher's conclusions are, that: 1. A large proportion of hospital cases of chronic endocarditis even when uncomplicated, have fever which may be high and long continued without apparent cause. 2. Neither the presence of fever nor its degree in such cases follows strictly the variety or degree of endocardial lesion. 3. Febrile cases with hæmorrhagic eruptions are prone to be fatal, while the febrile uncomplicated cases are almost as fatal as those with marked complications, and more fatal than the afebrile cases. 4. Improvement sometimes occurs even in cases with prolonged and high fever. 5. The line of demarcation which distinguishes malignant endocarditis from other forms is not distinct. 6. The rheumatic febrile cases of chronic endocarditis are as favorable as the afebrile, or even more favorable.

7. **Rheumatoid Arthritis.**—Nathan thinks there is no such distinct pathological entity as rheumatoid arthritis. The various cases of polyarthritis which have heretofore received this appellation are distinct clinical and pathological conditions which differ greatly from one another. They may be divided into (1) metabolic joint diseases of (a) arteriosclerotic, and (b) autotoxic form, and (2) infectious polyarthritis. The latter class includes cases with acute onset, severe general infection, and a large number of joints seriously or permanently damaged. They are frequently complicated with visceral inflammation, especially endocarditis. The course after the subsidence of the general infection or the initial acute joint symptoms depends (1) upon the damage to the affected joint, (2) upon sufficiency of time before the affected joints are again put into use, (3) upon the continued presence of the invading organism.

11. ***Amœba Dysenteriae*.**—Thomas found that boric acid, eucalyptol, ichthyol oil of cassia, and infusion of quassia had very little effect on *amœbæ*. Tannic acid 1:100, copper sulphate 1:2,000, potassium permanganate 1:4,000, and quinine sulphate 1:1,000 retarded the growth of the *amœbæ* and of cholera spirilla in thirty minutes. Succinic peroxide acid 1:1,000, potassium permanganate 1:2,000, quinine sulphate 1:500, silver nitrate 1:2,000, argyrol 1:500, and protargol 1:500 retarded the growth within thirty minutes. Thymol 1:2,500 destroyed *amœbæ* in fifteen minutes, but had only a moderate effect on cholera spirilla. The foregoing were test tube results, and should they prove efficient in the actual local treatment of the disease they will be of especial value to physicians, especially to those who practise in the tropics, and who find their patients intolerant of quinine.

12. **Pyelonephritis of Pregnancy.**—Cumston thinks the prognosis in many cases will permit awaiting natural labor, the symptoms disappearing after the uterus has been emptied. The pregnancy will continue the

nearer to term, the later the pyelonephritis has commenced. The vitality of the child in such cases is variable, it is not necessarily defective. As to treatment, should the renal pelvis empty itself by the ureter and the general condition remain good medical means with nutritious diet will suffice, and spontaneous labor will be followed by cure. But if the kidney ceases to be painful, suppuration continues, and the general condition becomes more and more unfavorable, either nephrotomy must be performed or premature labor induced; perhaps both will be required.

13. Tumor of the Cauda Equina.—Schmoll divides such tumors into three groups: 1. The development is from the filum terminale, there is no initial neuralgia, there are bladder symptoms, and paræsthesia in the sciatic nerve area. 2. The origin is in the bone, the cauda equina being secondarily involved, the development is comparatively rapid, neuralgic pain is present in the sacrum and both sciatic nerves, there is anæsthesia in the area innervated by the sacral plexus, paralysis of muscles supplied by the sciatic nerves and disturbed bladder and rectum function. 3. These cases begin with double sciatica and dull pain in the sacrum. The pain is intolerable, especially at night. Eventually there are paralysis of the bladder and rectum, and anæsthesia and paralysis of the muscles innervated by the sacral plexus. In the first group one must differentiate from tumors of the conus. In the second the tumors are very malignant and will vary clinically in accordance with the situation and development of the tumor. In the third there is a slow growth within the roots of the cauda, but such tumors are most favorable for surgical treatment.

14. The Spirochæta Found in Syphilis.—Rosenberger found these organisms the more abundant in the early days of the appearance of any lesion of syphilis. There were two forms, spirochæta refringens and spirochæta pallida, in addition to four varieties of spiral organism. It was believed that spirochæta pallida belongs to the animal parasites, and is a protozoon, also that it plays a part in the ætiology of syphilis. It has only exceptionally been found with any lesion which is not syphilitic. It is probable that failure to discover it heretofore was caused by its extreme minuteness, the difficulty attending its coloration, and its infrequency in the lesions and preparations which were examined.

PÆDIATRICS.

January, 1906.

1. Infant Feeding, By W. A. DICKEY.
2. Institution for Mental Defectives, By M. W. BARR.
3. Rheumatism of Childhood, By W. C. HASTINGS.
4. Observations on the Use of Formic Aldehyde as a Milk Preservative, By CARSTAIRS DOUGLAS.

1. Infant Feeding.—Dickey reiterates the necessity of mother's milk, if that is possible, for the infant. Diarrhœas are preventable with proper attention to feeding. Infant's food must (1) contain in proper proportion the elements that keep up growth and tissue waste, and (2) those that maintain the body temperature. Cow's milk is next in value to mother's milk. The latter is always sterile, the former is seldom so. The putrefactive bacteria are seldom absent from the former, and it is too often adulterated. Boiling diminishes its nutritive value, pasteurizing sterilizes it. The best diluents are water and a suitable cereal infusion, but no method of dilution will make cow's milk the equal of mother's milk. Cold water should frequently be given to infants, especially in summer. The careful regulation of the infant's hygiene is only second in importance to its food.

2. Institutions for Mental Defectives.—Barr gives an interesting and valuable résumé of the work which has been done in this field, with sketches of the men

who have chiefly been identified with it. He believes that in view of what has been done by these institutions for society and the State they should receive such protection as will ensure the stability and progress which legalized asexualization and segregation alone can give.

3. Rheumatism in Childhood.—Hastings desires to emphasize the fact that if a child has growing pains, tonsillitis, anæmia, and functional nervous disorders, the case is one of rheumatism and the heart is in danger. For the acute stage of this disease the same remedies are indicated as for adults, sodium salicylate, oil of wintergreen, salicin, and salol, with alkalies if the urine is excessively acid. For subacute cases not the salicylates but general tonics are indicated. The heart must be protected during an attack by rest and equable temperature. For the chorea of rheumatic origin the author recommends the salicylates and fluid extract of cimicifuga.

4. Observations on the Use of Formic Aldehyde as a Milk Preservative.—Douglas reviews this subject from the standpoints of the utility of milk preservatives, the various tests for formic aldehyde, the preservative power of the latter, its effect on the digestive ferments and on milk analysis, and its influence in milk on metabolism. He is convinced that this preservative has been judged too severely. Preservatives in milk are necessary, especially in summer, in view of the number of organisms which abound in it. Preserved milk is not as good as fresh milk, but there can be no harm in using formic aldehyde for this purpose in a strength of 1 to 30,000 or 1 to 40,000.

Letters to the Editors.

PURE AIR IN PNEUMONIA.

WESTCHESTER, BOROUGH OF THE BRONX,
NEW YORK, January 19, 1906.

To the Editors: I have read with some wonder in the *New York Medical Journal* the report of a "symposium" on pneumonia at a meeting of the Medical Association of the Greater City of New York. The speakers discoursed of medicine and of other things, but I do not learn from the report that one of them mentioned the single thing of supreme importance in the treatment of pneumonia, namely, fresh air.

We keep on talking of the unsatisfactory progress of the treatment of pneumonia, admitting no improvement over that of our fathers, or even forefathers, and do not see, or do not dare to acknowledge, that fresh air is the only remedy. With one or two exceptions, monumental in their loneliness, there are no specifics for disease except the body's own elaborations and defenses. These are aided by pure blood, and this in turn by rest, air, water, and food of right kind and amount. There are no stimulants like good blood and normally proportioned air. No human power can determine the complicated interactions of powerful drugs with the body in pneumonia, or whether they do good or harm, the chances being against the good.

Almost all respiratory diseases are due to indoor conditions. Outdoor air is the only antidote. This is universally admitted for phthisis, and pneumonia, though differing in detail, is essentially similar to phthisis in being an infectious disease of the lungs. In the face of our experience with phthisis, in the face of the familiar account of the pneumonia patients who have recovered in the open logging camp, in the face of the report by W. P. Northrup, in the *Medical Record*, volume lxvii, page 253, on the treatment of pneumonia in a child by fresh air, and in the face of the experience of many in the successful treatment in the

open air of bronchitis, pneumonia with delayed resolution, and pleuritic effusion, in children, how can we longer remain slaves to the bugaboo of "taking cold" from fresh air?

Can anyone prove by reason or experience that pure cold air inhaled, even at 0° F., can harm the sound or diseased lung? If cold air striking the surface of the body will cause anæmia of the skin and internal congestion, will not cold air inhaled cause the reverse condition? The physician who will order the air of the sick room kept at 72° F. will apply ice bags to the chest. If ice bags to the chest will favorably influence an inflammation in the lung, why may we not prescribe inhalations of cold air? If we pine and fade from indoor confinement when our lungs are healthy, do we not much more need the outdoor air when they are diseased? We have the answer for phthisis; when shall we have it for pneumonia? Shall we continue to let our pneumonia patients depend on crack ventilation and inhale carpet fibres, diminished oxygen, and carbon dioxide from lungs and lights and think to set all right by giving them canned oxygen, instead of letting them breathe the normal outdoor mixture for which lungs were evolved and to which they are therefore adapted?

I consider the following to be the essential principles of the treatment of pneumonia:

Absolute rest. Starvation, or such kind and amount of food, as recommended by W. Ewart for typhoid fever, as will not distend the bowels. A great deal of water to drink. No medicine without the clearest indication and the certainty that it will do no harm. Nothing but outdoor air to breathe all the time, day and night.

Let some one treat thus a series of hospital cases in Knopf window tents and see if the fatality of pneumonia cannot thereby be materially reduced.

WILLIAM C. DEMING.

Proceedings of Societies.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

One Hundredth Annual Meeting, held in Albany on Tuesday, Wednesday, and Thursday, January 30 and 31 and February 1, 1906.

(Continued from page 269.)

The President's Address was delivered by Dr. JOSEPH D. BRYANT, of New York. He reviewed the improvements in medicines and surgery which had come during the past century, dwelling particularly on the great benefit which had accrued from vaccination, anæsthesia, antiseptics, and asepsis. He dwelt also on the difference in the position occupied by the medical profession after the hundred years. In closing he said that the great effort of the society in the future would be to eradicate differences of opinion that might exist among practitioners, with an effort to prevent the exploitation of the public by irregular practitioners. With the medical profession of the State united, the task of securing proper legislation and preventing irregular legislation must be easier than it had ever been.

The Mayor of Albany's Address.—The Honorable CHARLES H. GAUS then welcomed the members to the old city of Albany and congratulated them on the celebration of the society's one hundredth anniversary.

The Lieutenant Governor's Remarks.—The Honorable M. L. BRUCE, representing the governor, who was unavoidably absent, presented the congratulations of the State to the society on its centenary, and said that undoubtedly much had been done in the past for

the health of the people by the medical profession of the State of New York, and still more might be expected as a result of the reunion which had taken place.

The State and Medical Education.—The Honorable ST. CLAIR MCKELWAY, president of the Board of Regents of the University of the State of New York, said that New York State had established a standard of education, preliminary and professional, which it required all physicians to reach before it would give its permission to practise. It was extremely improbable that this standard would be lowered or that the State would ever admit to practice in any of the branches of medicine persons who had not a good foundation in all the important medical sciences. On the other hand, there seemed no doubt that the State would gradually increase the standard as the progress of medical science demanded. This would not be done for the sake of physicians, but for the sake of its citizens and the better protection of their health.

Mr. McKelway looks forward with confidence to the time when the State might even provide medical education. This would not be in our generation or in the generation immediately following, but there seemed no doubt of its coming.

Greater Publicity in Medicine.—Ex-President GROVER CLEVELAND made an address in which he dwelt particularly on how much had been accomplished for the lengthening of life and the lessening of human ills, and how much was owed to a medical profession which was decreasing some of its own opportunities for money making by constantly laboring for the health of the community. He pleaded, however, for more publicity in the relationship of physicians to human ills, and for the exchange of more confidences between physicians and their patients. He did not think the people should be called in consultation in their own illnesses, but they should have more of an idea of what was done for them and to them. People did not like to think of their physicians as veiled prophets or mysterious attendants, but claimed responsive ministrations and sympathetic assurance. In this day of fear of trusts it was not surprising that there should be the feeling lest also medical practice should become a trust, and as it had been found that the greatest safeguard against the trusts was publicity, so the demand for more confidential relations between physicians and patient should be listened to.

Simultaneous Extrauterine and Intrauterine Pregnancy.—Dr. J. F. WHITBECK, of Rochester, reported a case of extrauterine pregnancy in which rupture took place about the eighth week. An abdominal section was made and the distended tube removed, with ligation of the vessels. Seven months later the woman gave birth to a healthy male child at full term, and it was evident that a double pregnancy had occurred at about the same time, one within and the other without the uterus. Notwithstanding the operation, the regular course of the pregnancy was not disturbed, showing how thoroughly conservative Nature could be in her processes, even at so important a time as during pregnancy. Extrauterine pregnancy was much more common than was formerly thought, and, while more frequently brought to attention by rupture before the eighth week, it might go on for months or to full term.

Breast Cancer was the subject of a paper by Dr. ROBERT F. WEIR, of New York (to be published).

Dr. ABRAHAM JACOBI, of New York, said that many patients suffering from "inoperable" cancer might be made much more comfortable and their existence prolonged by internal treatment. For this purpose he had found methylene blue in pill form an excellent remedy. It should be given at the beginning four pills a day, say, in half grain doses. This might be gradually in-

creased until six or even eight grains a day were taken. Methylene blue had an effect upon the kidneys which must be counteracted. This was best done by means of belladonna. Of the extract of belladonna, three fourths of a grain a day might be given. In combination with the methylene blue arsenous acid was often of service. Strychnine was indicated when the patients were weak. This treatment might be continued for two or three years. Dr. Jacobi had had patients live as long as six years. In some cases, where the tumors had been quite palpable at the beginning of the treatment, they could no longer be felt.

Dr. WHITBECK said that the surgeon who removed only glands that were palpable made a mistake; more patients had been lost on account of this than from anything else in the treatment of cancer. As soon as an enlarged gland was noted after an operation it should be removed without delay, so as to avoid infection.

Convalescence After Abdominal Section.—In this paper Dr. FREDERICK HOLME WIGGIN, of New York, said that many people were deterred from submitting to an operation by fear of the discomfort which followed for so many weeks. Much of this could be avoided by special care. He detailed some of his methods. Patients should be either in the hospital or in the care of their nurse for a week before the operation. The rest was good, and then their condition was better known and their symptoms were better understood after the operation. The date of operation should not be revealed to them, so as to avoid the intensity of the suspense. Patients should remain in bed, though they should be given massage, so as to better the circulation, and the rest cure generally. Friends should be excluded. After the abdominal operation, if vomiting continued, the stomach should be washed out and magnesium sulphate introduced. An enema tube should be passed into the rectum, so as to relieve the patient from the accumulation of gas, and no food should be given until a passage from the bowels had occurred. One one hundredth of a grain of eserine would often prevent paresis of the bowels. Where patients had no appetite, a dose of castor oil would give them one better than anything else. Care must be taken not to overstimulate patients who had been operated upon. In Dr. Wiggin's experience recovery took place better without alcohol than with it. When patients could not take liquid by the mouth, a saline solution should be introduced into the bowels, because this would prevent the discomfort from thirst.

Sanatorium Treatment for Tuberculosis.—In this paper Dr. J. H. PRYOR stated how much had been accomplished in the treatment of tuberculosis in the State sanatorium for the consumptive poor. In spite of red tape, false economy, and badly administered civil service, the records were most encouraging and represented some of the best results in the world.

Dr. BEMIS, of Jamestown, asked whether people from great altitudes suffering from tuberculosis did as well in the Adirondacks as those from the seashore. There seemed to be a tradition which said they did not. Unfortunately the poorer classes of people did not realize that they were ill soon enough for their cases to be diagnosticated as incipient tuberculosis.

Dr. JAMES J. WALSH, of New York, said that most of those in charge of sanatoria complained that patients were sent to them suffering, not from incipient tuberculosis, but from a rather advanced stage of the disease. The reason for this was that in the past the teaching of tuberculosis was with regard to advanced cases, and not the incipient affection. It was always a matter for serious thought to make a negative diagnosis if there was any suspicion of the presence of the disease. If a person was living in a tuberculous environment, any single symptom that persisted must be

considered sufficient to make a negative diagnosis inadvisable. If a person was dwelling or working near people suffering from a chronic cough, a pulse persistently above 90 required explanation before any assurance with regard to the nonexistence of tuberculosis could be given. If under similar conditions the patient had continuously even a slight rise of temperature, the same thing held true. The only way to know anything about the temperature was to have it taken three times a day, once rather early in the morning, and note whether there was a range of temperature of more than two degrees during twenty-four hours. If there was, the individual had some temperature disturbing factor. It was unusually fatal to wait for absolutely confirmatory signs. Bacilli would not be found in many cases until the disease was well advanced. Breaking down of tissue must first occur. Dulness would not often be found until after there was considerable infiltration, and râles were a sign of breaking down tissue, of pleuritic involvement, or of an acute bronchitis. The only early physical sign was the prolongation of expiration.

Dr. BERNSTEIN, of Rome, said that in a study of several hundred patients in an institution for several years he had noticed that those who presented even slight elevation of temperature, such as 99.5°, not infrequently had tuberculosis later, when it became evident that they had been subjects of the disease before and this had caused their rise of temperature.

Dr. PRYOR said that the textbooks of medicine described advanced tuberculosis, and that in order to recognize the incipient affection, physicians must now learn a new disease. It was nearly like the difference between the old fashioned diagnosis of inflammation of the bowels, which recognized the disease only when it became hopeless, and the present diagnosis of appendicitis, which gave an opportunity for saving the patient. He knew of no observations showing that patients from great altitudes did less favorably in the Adirondacks than those from sea levels. There had not been so large a diminution of the death rate of tuberculosis as was thought. Whatever decrease had come was due more to general sanitary measures than to special antituberculosis measures. The tuberculosis death rate varies with the general death rate.

Toxic Arthritis.—Dr. HENRY A. FAIRBAIRN's paper on this subject was read by Dr. Bristow, of Brooklyn. Rheumatism, said the author, was mainly a cover for serious error and ignorance in medicine. Acute rheumatism was a definite disease. Subacute rheumatism was reasonably well defined. Chronic rheumatism was a muddle, consisting of all the pains and aches around joints that were worse on rainy days. Not infrequently there was a thickening of joint tissues. It was said not often to follow acute rheumatism, but to come more generally after subacute rheumatism. All three forms of rheumatism could be grouped under the head of toxæmia, whether the poison was considered to be of microbic or of metabolic origin. The term toxic arthritis conveyed a more definite idea of the causation of the affection than the word rheumatism.

Dr. WISNER TOWNSEND, of New York, was not prepared to accept the term toxic arthritis, but there was no doubt that it was time to make an effort to get rid of the word rheumatism. Surgeons saw many cases of syphilitic, tuberculous, and other joint affections due to definite causes which had been diagnosticated as rheumatic. There were a number of varieties of rheumatoid arthritis which deserved special study. The two principal forms were hypertrophic and atrophic. It was not known as yet whether these were infectious or toxic.

Dr. VANDER VEER, of Albany, said that Dr. Fairbairn's suggestion that a change of name should be made was timely. The more cases were investigated

the less frequently was the diagnosis of rheumatism made. Many of the vague conditions around the joints were undoubtedly due to autoinfection. This came mainly from intestinal trouble, and how much the condition of this tract might affect a patient, surgeons knew because of the better conditions when the intestinal tract was thoroughly cleansed before an operation. There was still much to learn about the causation of these affections, and the less pretense of knowledge there was the more would the next generation feel the necessity for studying them.

Dr. B. O. KINNEAR, of Clifton Springs, said that many of the joint affections were due to over rich blood.

Dr. JACOB I said that rheumatism might mean almost anything, but polyarthritis was a definite affection, not always due to the same microorganism, however, but sometimes to a streptococcus, sometimes to a staphylococcus, and sometimes to the gonococcus. It used to be thought that when a single joint was affected the arthritis was of gonococcus origin, but now it had been shown that gonorrhoeal arthritis might affect half a dozen joints. When there was a single joint affected, especially in children, the disease was almost sure to be tuberculosis. This was true in nineteen out of twenty cases. These cases must not be treated surgically alone, but also medically. Good air and good food were not the only things needed; guaiacol, arsenic, and phosphorus gave excellent results.

Dr. WALSH said that the use of another general term like toxic arthritis would almost surely lead to as many abuses as was now the case with regard to the word rheumatism. What was particularly needed was more study of individual cases. Many cases of so called acute recurring rheumatism and of subacute rheumatism were really forms of beginning rheumatoid arthritis; hence the crippling which eventually occurred. Many of the cases of chronic rheumatism had nothing to do with the joints at all, but were nerve and muscular affections. Many cases of chronic rheumatism were really due to the faulty use of muscles in some occupation in which they had to be frequently employed. Very often the basis of this was a low grade inflammation of the nerve leading to a group of muscles which had become especially lacking in resistive vitality, and liable to infectious processes because of the amount of work required of it. Some of the so called rheumatisms were the pains of old dislocations of flat bones, and the like.

Dr. BRISTOW said that two terms in medicine more than any others covered a multitude of diagnostic sins. They were rheumatism and malaria. Fortunately malaria had gone out before the microscope. Now it was time to get rid of rheumatism. Dr. Fairbairn's paper was not so much a plea for change of terminology as for better diagnosis and individualization of cases. Much work of great value could be done along this line.

(To be continued.)

WESTERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

Fifteenth Annual Meeting, held in Kansas City, Mo., December 28 and 29, 1905.

The President, Dr. H. D. NILES, of Salt Lake City, in the chair.

(Concluded from page 218.)

Chylous Cysts of the Mesentery.—Dr. MILES F. PORTER, of Fort Wayne, Ind., stated that a study of the literature, together with the reports of twenty cases, including one of his own, formed the basis of his paper. The literature was very meagre; the best of it was to be found in current publications. The history was bound up with that of mesenteric cysts in general. Cysts

of the mesentery were first classified by Portal, in 1803. Killian reported the first chyle cyst treated surgically, but Bramann's was the first one operated upon. Carson was probably the first in America to report a case of chylous cyst treated surgically. These cysts were very rare, more so than serous cysts. The origin of chyle cysts must be regarded as manifold. They might be single or multiple, unilocular or multilocular, and multiple cysts might become multilocular single cysts and later unilocular by pressure absorption. There was nothing distinctive in chylous cysts save their contents. An exact diagnosis was neither possible nor necessary. A centrally situated movable tumor crossed by bowel would be almost certainly a mesenteric cyst. Puncture for diagnostic purposes was condemned. Abdominal pain was a common symptom, and recurrent attacks of pain accompanied by vomiting and other symptoms of intestinal obstruction were very significant. Chronic increasing constipation was a frequent symptom. A history of injury was common. The treatment was surgical and the technique would depend on the findings in each case. The fear of permanent chylous fistula in cases treated by drainage was unfounded.

The Treatment of General Peritonitis.—Dr. DONALD MACRAE, JR., of Council Bluffs, Iowa, read a paper on this subject in which he advocated the Fowler position in all suspected peritoneal infections, also the institution of free drainage at the time of the operation by means of large sized rubber tubing only. Drainage of the most dependent part of the pelvic peritoneal pocket was imperative. He urged the removal of the primary pathological factors when possible, and spoke against the use of gauze and flushing. He said the drainage tubes should be sucked at frequent intervals.

Appendicitis.—Dr. I. B. PERKINS, of Denver, read a paper in which he gave further reports from physicians who had suffered from this disease. He discussed the diagnosis of chronic appendicitis and the prodromal stage in acute cases. He expressed himself in favor of early operation in all cases. Fatalities were usually chargeable to delay. The management of delayed cases was discussed, also the attitude of the profession and of the public toward the operation.

The Treatment of Appendicitis.—Dr. O. BEVERLY CAMPBELL, of St. Joseph, Mo., followed with a paper on this subject, in which he drew the following conclusions: 1. In incipient appendicitis, until the patient was placed in the hands of the surgeon, all food and drink should be withheld, and the patient nourished per rectum. 2. Every patient should be advised of the advantages of an early operation. 3. Radical work, namely, the removal of the appendix or the closure of an opening in the cæcum should be made in abscess cases when it could be done without additional risk to the life of the patient. 4. The practice of merely draining in every abscess case should be condemned as nonsurgical. 5. An operation during a progressive diffuse peritonitis was attended with a higher mortality than the method of procedure recommended by the writer. 6. If the internist would direct his efforts in the treatment of appendicitis toward the protection of the peritonæum until he could transfer his case to the surgeon, the mortality in this disease would be greatly lessened. 7. The adoption of the more rational method of dealing with diffuse peritonitis would convert a large proportion of these cases into circumscribed peritonitis, when they could be rightly classed as large abscess cases, having the same mortality.

The Treatment of Appendicitis in Its Various Stages as it Comes to the Surgeon.—Dr. C. H. WALLACE, of St. Joseph, Mo., contributed a paper with this title, and summarized by saying that appendicitis was always a surgical disease; that every case should have and was entitled to operative measures within the first forty-eight hours; that the rapidly progressing stage

was the stage of applicability of the Ochsner treatment, and by it offered the lowest mortality; that cases coming to the surgeon with evidence of gradually subsiding symptoms should be deferred for a more favorable operative period; that every interval or chronic case should be urged to the operating table; that abscess cases should be given two safe operations rather than one hazardous one; that diffuse peritonitis should have all accumulated dependent cavities primarily and carefully incised and drained and not flushed, and secondarily the offending organ incised.

Dr. VAN BUREN KNOTT, of Sioux City, Iowa, followed with a paper in which he set forth his ideas at great length concerning the management of appendicitis based upon one thousand operations.

Extrauterine Pregnancy.—Dr. J. W. ANDREWS, of Mankato, Minn., read a paper on this subject, in which he reported having operated upon a woman who was ten weeks pregnant; the sac ruptured, and the operation was delayed thirty-six hours. The case was reported in detail. The steps of the operation he performed were not very different from those of an ordinary laparotomy. He counseled accuracy and rapidity in operating in these cases, and emphasized the necessity in many cases of thrusting the hand down through the pool of blood and securing the bloodvessels before attempting to mop out or otherwise remove the blood and clots. He thought drainage, as a rule, should be employed after laparotomy for extrauterine pregnancy.

Postclimacteric Hæmorrhages; Their Cause and Treatment.—Dr. A. L. WRIGHT, of Carroll, Iowa, called attention to the frequency of the occurrence of post-climacteric hæmorrhage after the menopause. He spoke of how often it was passed over slightly, with the thought that it was incident to the woman's age, until grave complications were at hand, or the true cause—carcinoma in most instances—was so far advanced as to place the patient beyond the pale of surgical aid. He called attention to the several changes that took place in the uterus at this time and caused hæmorrhage. The trend of the argument was to early recognize the pathological changes taking place in the uterus, and if in doubt remove the organ rather than take chances that would invariably result in death.

Gunshot Injuries of the Stomach.—Dr. J. N. WARREN, of Sioux City, Iowa, gave the history and analysis of 144 cases of gunshot injury of the stomach. He spoke of the character and situation of the lesion in uncomplicated cases in determining the prognosis. The time elapsing between the time of injury and the operation showed that the earlier the operation was performed the more favorable was the result. In complicated cases the number of lesions found and viscera injured added to the gravity of the case. He spoke of the results in the cases that were not treated by operation. The presence of food in the stomach with the discharge of the same into the abdominal cavity added to the danger of general peritonitis, either with or without operation.

The Symptoms of Spinal Disease.—Dr. S. C. BALDWIN, of Salt Lake City, Utah, called attention particularly to the early symptoms of spinal disease, in order that suffering might be earlier relieved and deformity avoided. The general or more common symptoms, and then such symptoms as rigidity, the gait, pain, paralysis, abscess, etc., were considered. The symptoms differed when different regions of the spine were involved. For instance, in the cervical region the first symptom noticed might be pain in the head, and, according to Whitman, earache might be a symptom of cervical disease. Before there was any sign of deformity the patient might complain of difficulty in swallowing, and even in breathing. In disease of the cervical region there might be, and often was, grunting respiration. Such general symptoms as weakness,

loss of appetite, loss of weight, rigidity, and general change of gait in walking, were apparent in disease of all parts of the spine. The writer has seen a number of cases of Pott's disease developing in patients over forty years of age, and two cases which he recalled developed after fifty. Weakness might show itself in a general drooping of the trunk, in an unsteady and stumbling gait, and in exhaustion requiring rest after the slightest exertion.

Drainage of the Male Pelvis.—Dr. WILLIAM JEPSON, of Sioux City, Iowa, read a paper on this subject, in which he pointed out the indications for drainage of the male pelvis and spoke of the obstacles in the way of instituting such drainage as compared with the female pelvis. He described a method of instituting drainage of the male pelvis, and reported the results he had obtained in nineteen cases. In all these cases there existed a diffuse pelvic peritonitis, with accumulations of purulent fluid often elevating the distended bowel high into the abdomen, and in two cases ascending between the mesentery and descending colon and overflowing from the pelvis into the left subrenal fossa, which was also opened and drained. In all but five cases free pus existed in the space to the outer side of the ascending colon, which in each instance was drained through the ileocostal space. In one case the distended parietic bowel necessitated opening it, and the establishment of an artificial anus. Three of the patients thus treated had died, one after an illness of nearly five months, during which time death on three or four occasions was threatened by intestinal obstruction, while a number of abscesses in the abdominal wall followed. Death resulted from exhaustion incident to the prolonged suppuration. In the second fatal case death took place ten days after the operation, due to toxæmia.

Gastric Dyspepsias Amenable to Surgical Treatment.—Dr. WILLIAM E. GROUND, of Superior, Wis., said in this paper that it was now recognized that many forms of digestive disturbance were dependent upon conditions entirely outside the stomach, and involved this organ either by direct extension of the pathological process or indirectly by nerve influence. Among these might be mentioned inflammatory or irritative conditions in the biliary apparatus, pancreas, duodenum, or appendix and adhesions of the stomach to the surrounding viscera. Within the stomach conditions remediable by surgical means were chronic gastric ulcer, hæmorrhage, pyloric obstruction, gastric dilatation with stasis, hyperchlorhydria, and cancer. The question of operative intervention in some of these conditions was still in dispute, but the wisdom of referring cases of perforating gastric ulcer, with or without adhesions, cicatricial stenosis of the pylorus, adhesions of the stomach to any of the surrounding structures, and perhaps chronic gastric ulcer, to the surgeon was now pretty firmly settled. Closely associated with ulcer was the sequence of cicatrization and contraction, and when this process involved the pylorus, it led to stenosis and obstruction, and later, if this was prolonged, gastric dilatation and atony would result. Whether the pylorus was obstructed by spasm due to the presence of the ulcer or to hyperchlorhydria, which almost always accompanied nonmalignant ulcer, or to the cicatricial contraction following the healing of an ulcer, the pylorus was rendered incapable of readily transmitting its contents, the stomach became distended, and its muscular walls were weakened, leading ultimately to permanent atonia gastrica. Stomach dilatation might be due to atony alone, but it was much more frequently due to mechanical obstruction at the pylorus. In this condition of gastric stasis food might remain in the stomach a day or more. In fairly advanced cases, when the obstruction had given rise to a compensa-

tory hypertrophy of the stomach, the peristaltic movements might be seen and felt through the abdominal walls, usually accompanied by pain and vomiting. Later, when the stomach began to dilate and assumed a more passive state, the patient complained of fulness and epigastric pains after meals. Fermentation took place, causing eructations and heartburn and frequent vomiting. Vomiting was a most prominent symptom when gastrectasia and fermentation were well established. When this sequence of events was set up, there was but one remedy, and that was in surgical intervention. The curative effects of an operation could not be attributed alone to drainage of the stomach or to short circuiting of the food current, as was so often contended, for unless the pylorus was closed food would pass through it. The explanation the writer had arrived at was to the effect that the cutting of the circular fibres in the pyloric end of the stomach did away to a considerable extent with the muscular unrest accompanying gastric digestion, especially where ulceration was present. To the author's way of thinking, gastroenterostomy acted much the same as cutting the fibres of the sphincter ani in anal fissure. In this latter condition the faeces continued to pass over the ulcer, but the paralyzed sphincter prevented friction, and it healed readily.

Restoration of the Perinaeum.—Dr. HOWARD HILL, of Kansas City, read a paper on this subject (to be published).

Gluteal Cavernous Angioma.—Dr. J. E. SUMMERS, Jr., of Omaha, reported a case, and said that cavernous angiombata of voluntary muscles were comparatively rare, and in the case of this report the size of the growth was exceptional. It was excised while the circulation was controlled by direct digital pressure on the common iliac artery through an abdominal incision.

Preoperative Thrombi in the Region of the Field of Operation as a Cause of Postoperative Complications and Death.—Dr. A. W. ABBOTT, of Minneapolis, in a paper with this title, said that thrombosis, especially of the veins, was often to be found, if looked for, in the vicinity of the field of operation. It might result from the pressure of a tumor, from cancer, or tuberculosis, etc., or might be the result of adjacent inflammation or traumatism. Usually no attention was paid to the condition. Thrombosis in the field of operation increased the danger. Were there any practical methods for avoiding these dangers? The author believed that many cases of fatal sepsis and pulmonary embolism and particularly many cases of so called ether pneumonia could be rightly ascribed to the infection of a thrombotic vein or its disturbance by rough handling, or both, that were otherwise inexplicable; so also with pyæmia, abscess of the liver, osteomyelitis, and other evidences of metastatic infection. Aural surgeons had formulated a definite operation for thrombi of the lateral and sigmoid sinuses, namely, ligation of the internal jugular vein and evacuation and drainage of the sinus. This was an eminently successful operation, considering the desperate condition which called for it, and, so far as the speaker knew, was the only established operation for thrombosis. He thought a similar course should be pursued in all operations complicated by thrombosis.

Conservatism in Postoperative Treatment.—Dr. S. C. BEEDE, of David City, Neb., referred to the increasing tendency among surgeons to hasten their patients out of bed and hospital after grave operations. His attention had first been directed to this matter when members of the laity began to mention frequently the shortness of time patients were detained by this or that surgeon. Nurses would speak with pride of the fact that their favorite operator would send a hernia or an appendix patient home in two weeks. Then another one, not to be outdone, made it twelve days

instead of fourteen. Another, to make a better showing than his competitor, shortened the period of disability to ten days, only to be met by a more daring rival with an eight day period for a clean abdominal section. This was not the limit of extravagance in this strife to make it appear easy to be operated on, but patients after extensive abdominal work had been carried out of bed and placed in a chair on the third day, and allowed to walk about the room on the fourth. It was creditable that the many weeks in bed once necessary could now be avoided by a more perfect technique, especially in the matters of more perfect control of hæmorrhage, aseptic precautions, discarding irritating antiseptics, avoiding unnecessary traumatism, and care in suturing and suture tension. These gave the best possible opportunities for Nature to do her reparative work, but she would work only so fast, and he thought there was a limit in time beyond which it was unsafe to urge her. His contention was that this limit had been overstepped, and that the perfect result which should be the aim in every case was thereby marred.

Officers.—The following officers were elected for the ensuing year: President, Dr. Malcolm L. Harris, of Chicago; vice-presidents, Dr. A. L. Wright, of Carroll, Iowa, and Dr. C. Lester Hall, of Kansas City, Mo.; secretary-treasurer, Dr. Arthur T. Mann, of Minneapolis. Salt Lake City, Utah, was selected as the place for holding the next annual meeting.

Book Notices.

Historischer Medicinal-Kalender. By Professor Dr. J. PAGEL and Professor Dr. J. SCHWALBE. Berlin and Stuttgart: Spemann, 1906. (From Paul B. Hoeber, New York. Price, 75 cents.)

The name of this calendar should have been modified to "Deutscher historischer Medicinal-Kalender." The title is misleading. Although it gives in a general way the interesting medical dates of the world, it is specifically German. Such names as Oliver Wendell Holmes, Osler, Metchinkoff, Semon, and many others are not to be found. Usually the death date is mentioned with the birth date, and *vice versa*; it has been omitted in the case of Marion Sims. Semmelweis (mentioned three times) is said to have been the discoverer of the causes of puerperal fever, and Holmes is not mentioned at all. Eduard Martin is given, but not Bier. There are several printer's errors, such as "Senatos" instead of Senator (page 171). Thiedemann (page 12) was not seventy-five years old when he died, but eighty, and spelled his name without the h, Tiedemann. The calendar is handsomely illustrated and contains many interesting data.

Die Krankheiten des Verdauungskanaals (Oesophagus, Magen, Darm). Ein Leitfadens für praktische Aerzte. Von Dr. PAUL COHNHEIM, Spezialarzt für Magen- und Darmkrankheiten in Berlin. Mit 17 Abbildungen. Berlin: S. Karger, 1905.

This volume is confessedly a rather elementary treatise, and for the most part a compilation based upon the larger works of Boas, Ewald, Rosenheim, von Leube, Riegel, Nothnagel, and von Noorden. It may perhaps serve a useful purpose for the beginner in stomach and intestinal diseases as an introduction to these authorities. For the serious student, however, the value of such books is at least problematical, and there does not seem to be much excuse for them, in view of the voluminous literature of the subject which already exists. The present work is good enough of its kind, and can only be criticised on the principle that the good is often the enemy of the best.

Miscellany.

Dechloridized Diet.—The withdrawal of chlorides from the diet is at present much in vogue for the treatment of dropsy due to Bright's disease and to heart disease, and also for obesity. The idea is that a dehydration of the tissues is brought about, but from whatever cause, the treatment has proved of much benefit in many cases of oedema and ascites. The formation of an appropriate diet has not been an easy task. In a paper read before the recent congress at Liège, and which appeared in *Le Bulletin médical*, Vidal goes very fully into all the details of the appropriate diet. Bread must be made by the baker without salt; the ordinary French bread has, as a rule, 8 to 10 grammes of salt added for each kilogramme, while the finer and daintier makes contain as much as 15 grammes of salt per kilo. There is no difficulty in making bread without salt, or rather without added salt, for the saltless bread necessarily contains the small amount of sodium chloride present in flour, amounting to 0.70 centigramme per kilo. Meat contains on the average 1 gramme of sodium chloride per kilo., and is one of the foods which can be eaten most easily without salt. It must always be used fresh, and it can be digested raw, grilled, or roasted, without salt and with butter according to taste. Of the dark meats, beef and mutton are the best to prescribe, and fowl among the white meats. With fish, the choice is limited to the fresh water varieties, the flesh of which only contains a few centigrammes of sodium chloride to the kilo. They may be taken fried or lightly boiled. The flesh of salt water fish contains a large amount of sodium chloride, reaching, in some cases, 4 grammes per kilo. Fresh eggs are easily eaten without salt, raw or plain boiled. An egg contains about 25 centigrammes of sodium chloride. The yolks are very useful for making sauces, which help to give a relish to insipid articles of diet. Fresh butter may be used as freely as the patient likes, and also fresh cream. Saltless cheese may be allowed in small quantity. Potatoes are an excellent food for the Bright patient. They are easily eaten without salt, boiled or baked, *sauté* in butter to brownness, in salad, or in a purée with milk. Rice is equally valuable as a food, and the following may also be included in the régime: Green peas with butter or sugar, carrots, leeks cooked like asparagus, endive, lettuce, French beans, celery, artichokes, and salads dressed with oil and vinegar. The preparation of the various green vegetables requires a little management, if they are to be served up in an appetizing way without the addition of salt. The jelly, which cooks call "glazing" can, if made without salt, be used for giving a flavor to different sauces and vegetables. About an ounce to an ounce and a half of this jelly may be used for cooking each day, and additional flavors obtained by the use of tarragon, thyme, bay leaves, onion, and parsley. It is possible in this way to give a flavor to dishes, so that the absence of salt is quite overlooked. Certain sauces (Béarnaise, Hollandaise, and mousseline) which, as a digestive aid, are usually served with meat, fish, and certain vegetables, may be allowed as a treat, on condition that the patient makes a discreet use of his privilege. Thin vegetable soups are made easily enough, and can be thickened with tapioca, vermicelli, and the like. Bouillon contains as much as 10, 12, or even 15 grammes of sodium chloride to the litre, and is, therefore, a regular salt solution. To its strong chloridization must be attributed the accidents following its use, which have been noticed again and again in the case of kidney, and of some cardiac affections. Without salt its flavor is far from pleasant, a fact which, to a large extent, deprives it of nutritive value. Sweet meats, pastry without salt, and fruit, raw, cooked, or as jam, can be given freely. Chocolate is an excellent

food and has an additional advantage in that in every 100 grammes (Gautier) it contains 0.67 gramme of theobromine, which is considered to be an excellent dechloridizing agent. For drink, a litre and a half to two litres of water should be taken daily, but the water may be replaced in part by mineral waters, which do not contain more than a few centigrammes of sodium chloride per litre. Sugar, lemon, or syrups may be added to the water according to taste. Tea, coffee, and beer, which contain a negligible amount of chlorides and are slightly diuretic, can be taken in moderation. Wine, so long and so strictly prohibited to the kidney case, does not appear to produce the least disadvantage when taken in moderation. The effect of the diet can be noticed on the first day by the decrease in weight, which proceeds steadily, but much more quickly when the patient is kept strictly to bed. With the disappearance of oedema, the patient returns to a more active life and develops a big appetite. The proportions of meat, bread, and vegetables must be increased in order to provide freely for a "living ration." It is often surprising to observe the ease with which the régime becomes established, especially if the little culinary devices have been pointed out, whereby, for certain foods, the absence of the savor of salt can be concealed. The diet can be arranged to suit the taste of each patient, and yet answer the requirements of the treatment. Medical treatment can be associated with the régime. Sudorifics do not eliminate any chlorides, while purgatives eliminate comparatively few only. Of diuretics, squills and nitre have an insignificant effect; potassium acetate in two to three drachm doses is active but uncertain; theobromine is the most efficient diuretic and dechloridizer. Digitalis increases the action of theobromine, but has no effect by itself in renal or cardiac cases, though its action on the heart in the latter class promotes diuresis.—*The Practitioner*.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the week ended February 2, 1906:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
Arkansas—Fort Smith.....	Jan. 13-20.....	1	
California—San Francisco.....	Jan. 13-20.....	14	
Delaware—Wilmington.....	Jan. 20-27.....	3	
Florida—Alachua County.....	Jan. 20-27.....	3	
Florida—Gadsden County.....	Jan. 20-27.....	1	
Florida—Jacksonville.....	Jan. 20-27.....	8	
Florida—Polk County.....	Jan. 20-27.....	1	
Kentucky—Covington.....	Jan. 20-27.....	8	
Louisiana—New Orleans.....	Jan. 20-27.....	4	
Maryland—Baltimore.....	Jan. 20-27.....	1	
Nebraska—South Omaha.....	Jan. 13-27.....	8	
Ohio—Cincinnati.....	Jan. 19-26.....	7	
Ohio—Dayton.....	Jan. 20-27.....	1	
South Carolina—Camden.....	Jan. 13-20.....	1	
Wisconsin—Appleton.....	Jan. 20-27.....	8	
Smallpox—Insular.			
Puerto Rico—San Juan.....	Dec. 1-31.....	Present.	
Smallpox—Foreign.			
Argentina—Buenos Ayres.....	Oct. 1-31.....		47
Canada, New Brunswick—Queens County.....	Jan. 9-18.....	Present.	
Canada, New Brunswick—Sunbury County.....	Jan. 9-22.....	106	
China—Shanghai.....	Dec. 21.....	Present.	
France—Paris.....	Jan. 6-13.....	17	1
Ecuador—Guayaquil.....	Dec. 17-24.....		2
India—Bombay.....	Dec. 26-Jan. 2.....		7
India—Calcutta.....	Dec. 9-16.....		20
India—Karachi.....	Dec. 25-31.....	3	1
India—Madras.....	Dec. 16-29.....		15
Italy—General.....	Jan. 4-11.....	22	
Mexico—Tuxpam.....	Jan. 16-23.....		1
Russia—Odessa.....	Dec. 30-Jan. 6.....	16	2
Russia—St. Petersburg.....	Dec. 23-30.....	10	3
Spain—Barcelona.....	Jan. 1-10.....		4
Spain—Cadiz.....	Dec. 1-31.....		1
Turkey—Constantinople.....	Dec. 17-31.....		8
Yellow Fever—United States.			
Louisiana—Jefferson Parish (Kenner).....	Jan. 28.....	1	

<i>Yellow Fever—Foram.</i>				
London—Guyanaquil	Dec.	17-24	8	
Mexico—Merida	Jan.	14-20	2	1
Mexico—Vera Cruz	Jan.	14-20	2	1
<i>Cholera.</i>				
India—Calcutta	Dec.	9-16	61	
India—Madras	Dec.	16-29	10	
India—Rangoon	Dec.	16-23	13	
Russia—Government of Lomza	Dec.	23-30	4	1
Russia—Government of Ostrow	Dec.	23-30	1	1
Russia—Government of Ploek	Dec.	4-17	50	20
Russia—Government of Siedlee	Nov.	23-Dec. 26	22	10
Russia—Warsaw	To Dec. 18		9	5
<i>Plague.</i>				
<i>Africa, Portuguese East Africa.</i>				
Clonde	Nov.	12-18	1	1
India—Bombay	Dec.	26-Jan. 2	9	
India—Calcutta	Dec.	9-16	21	
India—Karachi	Dec.	24-31	20	15
Japan—Shimonseki	To Dec. 23		5	
Mauritius	Dec.	8-28	15	12
Peru—Cuzco	Dec.	11-20	1	1
Peru—Lima	Dec.	11-20	1	1
Peru—Mollendo	Dec.	11-20	1	
Peru—San Pedro	Dec.	11-20	4	

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ended January 31, 1906.

- ANDERSON, J. F., Passed Assistant Surgeon. Assigned to duty in the Hygienic Laboratory; effective January 23, 1906.
- COFER, L. E., Passed Assistant Surgeon. Letter granting leave of absence for twenty days from January 19th, amended to read twenty days from January 20, 1906.
- COLLINS, GEO. L., Assistant Surgeon. Granted leave of absence for two days from January 22, 1906, under provisions of Paragraph 191 of the Regulations.
- CORPUT, G. M., Passed Assistant Surgeon. Granted five days leave of absence from January 16, 1906, under provisions of Paragraph 191 of the Regulations.
- CORPUT, G. M., Passed Assistant Surgeon. Directed to proceed to Kenner and other places in Louisiana for special temporary duty, upon completion of which to rejoin station in New Orleans, La.
- GRUBBS, S. B., Passed Assistant Surgeon. Granted twenty-one days leave of absence from February 2, 1906.
- HOBDDY, W. C., Passed Assistant Surgeon. Relieved from duty at Honolulu, Hawaii, and directed to proceed to San Francisco Quarantine Station and assume command of the Service, relieving Passed Assistant Surgeon H. S. Cumming.
- KALLOCH, P. C., Surgeon. Reassigned to duty at Portland, Me., Quarantine Station.
- MCLAUGHLIN, A. J., Passed Assistant Surgeon. Relieved from temporary duty at Berlin, Germany, and directed to rejoin station at Naples, Italy.
- STEARNS, W. L., Pharmacist. Granted five days extension of leave of absence from January 27, 1906.
- WALERIUS, MATHIAS, Pharmacist. Granted thirty days leave of absence from February 15, 1906.

Army Intelligence.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending February 3, 1906:

- BUSHNELL, GEORGE E., Major and Surgeon. Granted thirty days' leave of absence.
- CLARKE, JOSEPH T., Major and Surgeon. Granted three months' leave of absence.
- GANDY, CHARLES M., Major and Surgeon. Granted ten days' leave of absence.
- GRISSINGER, JAY W., First Lieutenant and Assistant Surgeon. Leave of absence extended ten days.
- ROBERTS, WILLIAM, First Lieutenant and Assistant Surgeon. Ordered to proceed from Fort Hamilton, N. Y., to Fort Jay, N. Y., for temporary duty.

Navy Intelligence.

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 3, 1906:

- FARENHOLT, A., Surgeon. Detached from the *Raleigh* and ordered to the *Oregon*.
- FREEMAN, G. F., Passed Assistant Surgeon. Detached from the Naval Station, Cavite, P. I., and ordered to the *Raleigh*.
- GATEWOOD, JAMES D., Surgeon. Designated by the Acting Secretary of the Navy, is detailed as a member of a joint board of medical officers of the Army and Navy, appointed by order of January 11, 1906, War Department, to consider improvements in the first aid dressings and uniformity of equipment for the medical departments of the two services, vice Surgeon Charles F. Stokes, relieved.
- RIXEY, P. M., Surgeon General. Commissioned Surgeon General and chief of the Bureau of Medicine and Surgery, Navy Department, with the rank of rear admiral, from February 5, 1906.
- ROTHGANGER, G., Surgeon. Detached from the Naval Hospital, Norfolk, Va., and ordered to the Naval Hospital, New York, N. Y.
- WHEELER L. H., Assistant Surgeon. Ordered to the Naval Station, Cavite, P. I.

Births, Marriages and Deaths.

Born.

KILBOURNE.—In Chicago, on January 5th, to Dr. Edwin D. Kilbourne, United States Army, and Mrs. Kilbourne, a son.

Married.

BISSELL—STANFORD.—On Wednesday, February 7th, Dr. Frank S. Bissell and Miss Helen Gertrude Stanford.

CLARK—SCOTT.—In Washington, D. C., on Tuesday, January 23rd, Dr. John A. Clark, United States Army and Miss Anna Nicholson Scott.

HUNT—INGALLS.—In Atchison, Kansas, on Thursday, January 25th, Dr. Jesse Edwards Hunt and Miss Marion Ingalls.

WING—HAUFMAN.—In Cheyenne, Wyoming, Dr. Alvin E. Wing and Miss Lena Haufman.

Died.

BACON.—In New Haven, Connecticut, on Saturday, January 27th, Georgiana Woolsey, wife of Dr. Francis Bacon, aged seventy years.

BENNETT.—In San Antonio, Texas, on Friday, January 26th, Dr. Edward Bennett, of New York, aged sixty-nine years.

CARPENTER.—In Cleveland, Ohio, on Sunday, January 21st, Dr. George H. Carpenter, aged eighty-five years.

CROFTON.—In New London, Connecticut, on Monday, January 29th, Dr. Joseph R. Crofton.

DYE.—In Louisville, Kentucky, on Monday, January 29th, Dr. John H. Dye, aged twenty-six years.

DYE.—In Louisville, Kentucky, on Monday, January 29th, Maud Manuel, wife of Dr. John H. Dye, aged twenty-six years.

EVANS.—In Philadelphia, on Friday, January 26th, Dr. Edmund H. Evans, aged forty-five years.

FOWLER.—In Albany, N. Y., on Tuesday, February 6th, Dr. George Ryerson Fowler, of Brooklyn, aged fifty-seven years.

HANCOCK.—In Toronto, Canada, on Friday, January 19th, Dr. Joseph Hancock, aged fifty-five years.

HARRISON.—In Brunner, Texas, on Friday, January 19th, Dr. William H. Harrison, aged sixty-five years.

HEAD.—In Syracuse, N. Y., on Monday, January 22nd, Dr. Adelbert D. Head, aged sixty-three years.

JOHNSON.—In Minneapolis, on Saturday, January 27th, Dr. Asa Emery Johnson, aged eighty years.

KELLER.—In Harrisburgh, Pennsylvania, on Thursday, February 1st, Dr. William Henry Keller, aged forty-eight years.

PARKHILL.—In Howard, N. Y., on Thursday, January 25th, Dr. Reuben F. Parkhill, aged seventy-four years.

PIROSH.—In Chicago, on Thursday, January 25th, Dr. Berthold Pirosh, aged fifty-six years.

PORTER.—In Philadelphia, on Tuesday, January 30th, Dr. William G. Porter, aged fifty-nine years.

New York Medical Journal

INCORPORATING THE

Philadelphia Medical Journal and The Medical News

A Weekly Review of Medicine

VOL. LXXXIII, No. 7.

NEW YORK, FEBRUARY 17, 1906.

WHOLE No. 1420.

Original Communications.

THE TREATMENT OF CEREBROSPINAL MENINGITIS.*

By O. T. OSBORNE, M. A., M. D.,

NEW HAVEN, CONN.,

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS AT
YALE.

The part of the discussion on cerebrospinal meningitis to which I was appointed is pathology and treatment, but as so much interest lies in the ætiology and manner of infection, and in the question of contagiousness of the disease, perhaps we cannot have too many expressions of opinion in order to arrive at the general belief.

During the last year one could hardly find a medical journal that did not express views of both the contagiousness and noncontagiousness of cerebrospinal fever.

My personal belief is that it is very mildly communicable, no more communicable than pneumonia or typhoid fever. By this I mean that the nurse or other person caring for a patient sick with cerebrospinal fever might acquire it by carelessness in handling or caring for the nasal or throat secretions of the patient, and the same is absolutely true of pneumonic excretions and of typhoid fever excretions.

I do not wish to be understood as believing that cerebrospinal fever should not be classed as a reportable disease, but I do take the stand that it is no more a reportable disease than is pneumonia, that it is no more communicable than is pneumonia, that a large majority of cases do not die, and that it is not contagious.

In other words, I deplore the fear of the disease that the public has been taught to have. We dare not tell a patient with cerebrospinal fever what the trouble is, and hardly dare confide it to his family, as such knowledge, on account of needless fear, detracts from his ability to recover.

Predisposing causes of acquiring this disease are, like pneumonia, unhygienic surroundings and a debilitated state of the system.

The germs which cause this fever have been found in the nostrils and throats of perfectly healthy individuals, and the same individuals have remained well, showing that under normal

conditions the germ is tolerated and that it is not rabidly infectious. An epidemic of this disease does not start from a focus and widen out, but is widely spread, striking at once a great many persons who in no possible way could have come in contact with each other. This is like the la grippe epidemics, showing that avoidance of those who are ill with the disease will not at all prevent an attack of it.

In a very few instances in this two year epidemic of cerebrospinal meningitis, in Connecticut and elsewhere, have cases of apparently direct communicability been reported, and, as already stated, no more frequently than will occur in typhoid fever and pneumonia. The report of the Children's Hospital, in Boston, of the admission of 110 patients with this disease in eight years, all treated in open wards, without a single case originating in the hospital is to me absolutely positive proof of its noninfectiousness. In all of the above hospital cases the diplococcus intracellularis was found, and the only precaution against contagion was ordinary careful cleanliness of the patient and the nurse's hands.

We have heard discussed the ætiology of the disease. I will only refer to some recent investigations under the auspices of the German government. Twenty-nine autopsies on patients dead of this disease were carefully made, twenty-two were children under ten years of age, and seven were adults. This report shows that the infection started in the pharyngeal tonsil, entered the cranium through the sphenoid bone, travelling along the vessels which run from the pharynx into the sella turcica through the sphenoid foramina. The part of the brain first affected was the hypophysis, or pituitary body. There was no evidence in these twenty-nine autopsies of the infection passing through the cribriform plate of the ethmoid, and the infection seemed to travel by lymph channels rather than by blood channels. The bacteriological studies in these investigations show that the meningococcus was not necessarily the only germ to produce the disease, and the investigators state that "the real cause seems to be as unknown as that of scarlet fever." In a recent bacteriological report in New York of 150 cases the pneumococcus infection of the brain was found to be of much worse prognosis than the meningococcus infection.

To briefly refer to the pathology of the disease that is of interest to the clinician, it may

* Read at a meeting of the New Haven County Medical Association, held in Waterbury, Conn.

first be noted that during an acute attack the only organs of the system involved are the brain and spinal cord. All grades of congestion, inflammation, and pus formation can occur on the surface of these organs, and I am convinced that many cases abort with only the primary first congestion. The first symptoms will denote the part of the brain or spinal cord first congested, and the symptoms will of course denote the amount of pressure exerted by the exudation. In my personal experience last winter there were many more cases of spinal irritation and congestion than of cerebral inflammation.

In typical advanced cases the brain is covered by a thin, yellowish pus which lies over the pia mater, and little petechial hæmorrhages may be found on the surface of the brain. The rapidity with which this exudate may form and cause pressure symptoms is unfortunately known to us all. This fulminating variety of cerebrospinal fever was, fortunately, in the last two years, in Connecticut, not very frequent.

The pus formation and even the simple exudate may not be equally distributed; one portion of the exudate may be clear, and in another part of the brain there may be pus deposits. The ventricles of course are generally filled with exudate.

Although primarily the inflammation is limited to the cerebrospinal system, there is no disease that can have as many complications and sequelæ as cerebrospinal meningitis. Besides deafness, blindness, neuritis, and paralysis, we may have pneumonia, pleurisy, endocarditis, pericarditis, nephritis, and arthritis. This disease is not a septicæmic process, and I believe we rarely or never have metastatic abscesses. Neither do the lymph glands nor the spleen ordinarily enlarge.

The symptoms are referable to the pathology of the disease. There is very irregular temperature, depending upon whether the nervous system is in condition of excitement or shock. The same is true of the character of the pulse. The first symptoms are those generally of a congestion of the throat and nose, often a congestion of the conjunctivæ, and generally a little deafness. Referred pains to the joints of the lower extremities are frequent, there may be intense backache, may be shoulder and arm pains, generally severe headache, may be contraction of any group of muscles, more frequently the muscles of the back of the neck. The next symptoms depend entirely upon where the greatest inflammation is located in the cerebrospinal axis and then the amount of pressure from exudates and where that pressure is exerted. Reflex vomiting is due to cerebral irritation, and constipation is often due to retarded peristalsis from the same cause. Intermittent pulse and Cheyne-Stokes respiration show pressure on the medulla. After recovery left over stiffening of the muscles, stiffening of joints, neuritis, deafness, or actual mental deterioration, all depend entirely upon the previous pressure and therefore lack of nutrition, the different centres may have been subjected to during the acute process.

The treatment, then, consists, there being no specific antidote to the disease or germ, in diminishing the congestion if possible, taking means

to prevent or relieve cerebral or spinal pressure, if possible, and combatting all acute symptoms and complications as they occur.

Diphtheria antitoxine in cerebrospinal meningitis is theoretically unsound and practically a failure, if the large number of careful observations are to be considered authentic.

Spinal puncture has been proved not to be a curative procedure. It seems also not to ameliorate acute symptoms sufficiently often to make it a procedure always to be followed. There is also some slight danger connected with it. Also many punctures are made without the withdrawal of fluid. Injections of several antiseptic solutions into the cerebrospinal canal have been made, but none have been proved curative or even to ameliorate the inflammation. Spinal puncture is certainly positively indicated when there is cerebral pressure. As to whether it is indicated for diagnostic purposes only I am very much in doubt except in rare instances. Not being as simple as an examination of the sputum in suspected pulmonary tuberculosis, or as the serum test in typhoid fever, also, the treatment of cerebrospinal fever not being specific, and the treatment of all cases of meningitis being based on the same principles, also, the diagnosis of a meningitis being generally most easy, I fail to see the necessity for spinal puncture with that object.

The almost constantly beginning sore throat should be treated with antiseptic gargles and sprays, none better than the hydrogen peroxide solution. Conjunctivitis should be treated by simple boric acid drops. A calomel or saline purge should be given as is sensible in the beginning of all acute diseases and more particularly where there is cerebral congestion. Painful joints, a frequent beginning symptom, should be wrapped with cotton and kept warm, and pain, generally the most early symptom, should be stopped with morphine by the mouth or hypodermatically, depending upon its intensity.

If there is vomiting or repugnance to food, it should not be insisted upon for the first two or three days, as the patient is better without it. He should have plenty of water to drink if he cares for it. If the vomiting is frequent and the nausea severe, morphine hypodermatically will, of course, stop it, and let me emphasize my belief that with severe pain anywhere morphine should be given in sufficient doses, whatever that dose may be, to stop it and hold it in check, and with the frequency that is needed. Nerve pains from cerebrospinal meningitis are exceedingly depressant to the heart.

If the pain is not severe and there is no vomiting, and if the pulse is good, the first day or two bromides or chloral may be administered, but certainly they should not be given more than two or three days. Coal tar products I do not believe give the kind of action that we want, they are too depressant and debilitating and act badly on the blood.

To quiet cerebral excitement and delirium and also pain, and to diminish the necessity for large doses of morphine, in other words, intensifying the action of the morphine that must be given, I believe there is nothing in the materia

medica that will compare with ergot. Physiologically it contracts the bloodvessels, and is of course indicated in cardiac weakness or with soft pulse and dilated arteries, but it also has a decided sedative action on the central nervous system, as it seems to contract and relieve congestion in the cerebral and spinal vessels. A patient who cannot sleep even with large doses of morphine will generally be found to sleep well after a dose of ergot has been added. When the best action of ergot is needed it must be given intramuscularly or deep subcutaneously, and a pure, aseptic fluid extract must be used.

The best position for the injection is in the deltoid muscle, and if swelling or irritation occurs, a wet dressing should be placed upon the arm. Other injections should be given into the same muscle, dodging, of course, the points already punctured. This causes but one side of the body to be disabled, or sore, or painful. Of course if the injections must be used long enough to make this arm too sore, the other arm must be used, or the calf of the leg. I have never seen an abscess from ergot in my own or in consulting practice. The frequency of a hypodermic injection depends, of course, upon the symptoms. I have given them every three hours, but I think the average frequency should be about once in six hours, unless there is great cerebral excitement or the pulse is very bad. An indication that too much ergot is being used is a very high pulse tension and a too greatly slowed heart.

The ice cap to the head and the spinal ice bag are, I believe, very necessary, and especially an ice bag to the back of the neck is of positive value. I keep up these ice applications more or less constantly, depending upon the positive local discomfort they give the patient, unless the temperature is subnormal. If the temperature is subnormal or the surface of the body is cold, dry hot applications are certainly of advantage. Personally I have had no experience with hot water baths, but theoretically, provided they could be given with a minimum of disturbance to the patient, they should at times do good. In other words, anything harmless that will bring the blood to the surface of the body and relieve the internal congestion in low temperatures in cerebrospinal meningitis is good treatment.

Ice, ergot, and morphine I believe is the treatment that will save and has saved many patients from death from this disease.

The general care of the patient should be the same as in typhoid fever; a large, airy room, kept rather warm, if the weather is cool. The room should be light and sunny, the eyes properly shaded if the light is objectionable. I do not believe in a darkened room for the treatment of these cases, except while they are sleeping. The patient should be kept very quiet, the nurse in attendance should be absolutely calm, there should be no bustling, and no talking should be done except what is directed toward the comfort of the patient. The care of the mouth and the body should be the same as in typhoid fever. The urine should be frequently examined to note albuminuria, if it should appear. The feet should be kept warm with a hot water bag most of the

time. The bowels should be moved daily, either with glycerin injections or with mild salines, unless the patient is too weak.

After the first few days the nutrition is very important, and expressed beef juice, raw eggs and milk should be given sufficiently for positive nutrition, not, however, in excess, lest indigestion be caused.

Alcohol I avoid if possible, but use it in small doses in emergencies. Theoretically, it should not be used in meningitis on account of its exciting the brain. Practically a little of it may work well if the heart and circulation require that sort of vasodilatation on the surface of the body.

Strychnine should most certainly be avoided unless there is severe cardiac depression and ergot has failed.

Quinine should never be given on account of the cerebral stimulation that it causes.

As soon as the patient begins to get well, the activity of the disease having ceased and ergot being no longer needed, I believe that potassium iodide or sodium iodide in small doses, from one to five grains, depending upon the age, is efficient in aiding the absorption of the exudates.

I believe a patient should remain in bed a week after the cessation of fever, the diet being gradually increased. After that time the convalescence should be slow and a resumption of duties put off as long as possible. During this period the patient should receive some form of iron.

Paralyses, stiffening of the muscles, and contractions should be treated with massage and electricity. If there are adhesions in joints they should be forcibly broken up under chloroform.

Complications occurring during the fever may be treated by such local applications as they seem to require, but little other medicine, if any, than the above outlined should be given.

If you will allow it, I will briefly refer to my last winter's cases as illustrating different types of the disease, some showing complications.

I think we have come to believe too implicitly that the disease cannot be mild and that the prognosis is bad, viz., as I have been told by a number of physicians, that over one half of the patients die. I am convinced this is wrong and that a large majority of cases recover.

CASE I.—A student, while in his room with an injured knee, began with a sore throat, tonsillitis without exudate, slight fever, and some headache. In two days there was severe pain in the arms and shoulders, then a macular eruption, reddish in color, all over his body. There was sharp pain in the bowels, requiring morphine for several days to stop it. There was no diarrhœa, he was very constipated, almost obstipated, had a good appetite, the pulse was slow, there was subnormal temperature, pain in the legs and ankle joints, but no swelling or heat. There was a systolic blow, best heard at the apex of the heart, but there were no cardiac symptoms. He was sick ten days and out in two weeks. His heart was all right, but his legs were a little stiff. His treatment was small doses of salicylic acid.

CASE II.—A married woman, 30 years of age, began with a sort throat, very red tonsils and pharynx, but no exudate. She had a violent headache, complained of the light hurting her eyes, was very irritable and easily fretted. She had high fever and was obstinately constipated. Soon there was lumbar backache and ex-

cruciating sciatic pains, especially in the left leg. The leg became stiff and could not be moved, and there was a very painful ecchymotic patch over the left ankle. There was herpes on the left forearm, also some urticarial wheels which itched badly. Both ankles showed some swelling. The fever was irregular, tended to be high, and lasted two and one half weeks. The violent headache lasted one week. Soon the right leg became affected exactly like the left, then, both shoulders, all so painful that she screamed when moved. There was no vomiting. The tongue was coated as heavily as in typhoid fever. Later an ecchymotic patch appeared on the right foot and another on the right arm. She was up in four weeks and out in six weeks, but her legs were stiff for two months. Her treatment was ergot, ice, and sodium salicylate.

CASE III.—A girl 21 years of age, seen several times in consultation, was taken in the middle of the night with pain in the back and legs and lower abdomen, so severe that she screamed with it. There were tetanic spasms, opisthotonos rapidly recurrent, with attacks of pain. Her head was clear, and there was no headache whatever. The leg muscles cramped violently. One and one half grains of morphine hypodermatically, in three hours, with added chloral and bromides, did not stop the convulsions. Injections of hyoscine 0.02 grain with repeated chloroform inhalations quieted her to sleep, but 0.01 grain of hyoscine had to be repeated every two or three hours for five or six times, then less frequently. Her subsequent treatment was ergot hypodermatically and a spinal ice bag. There were no eruptions and no brain symptoms at all. She was down stairs in two weeks and out in three weeks. Her legs were very weak, there was persistent lumbar backache, and she was very sleepless for weeks.

CASE IV.—A boy, about 18, seen in consultation, had been ailing a day or two, then suddenly became stupid, comatose, when aroused was deaf, had a few red maculæ on his feet near the ankles and urticarial spots on his arm. He had repeated attacks of heart failure, so severe that it seemed as though he could not live an hour. He was revived by ergot and his head became clear. An ice cap was kept on his head, but for several weeks, if the ergot was stopped, his heart would again fail and he would again become stupid. He was dangerously ill for five weeks, and finally died suddenly when he was supposed well and convalescent.

CASE V.—A young child three years of age was taken suddenly with high fever which soon dropped. He vomited frequently and had an eruption like German measles with an almost scarlatinal efflorescence. He cried constantly, was sleepless with pain, which was not well explained but apparently was mostly in the head. He was given ergot, and entirely recovered in a week.

CASE VI.—A boy 15 years of age began with pain in both ankles, lower legs were stiff, there was no swelling, and but little fever. In two days he had a sudden attack of coma which lasted half an hour, followed by high fever, severe headache, pain in his shoulders and legs, and he yelled when his legs, arms or shoulders were moved. His neck was a little stiff, there were no joint swellings. The next day he had diaphragmatic pain, so severe that he could hardly breathe, a dark cyanotic color to his face, his nostrils dilated. The urine had to be drawn, as he could not exert abdominal pressure enough to pass it. Cardiac pain next developed, which was severe, his heart became dilated until the apex beat was one inch outside the nipple line and in the sixth interspace. There was a loud systolic blow at the apex. He often had attacks of Cheyne-Stokes respiration, and respirations were always short and jerky. There were frequent attacks of angina pectoris. The pulse at one time would be

of very high tension and full, and in an hour might be very weak. His head was always clear, and he had no more attacks of coma, was very sleepless on account of pain. He received morphine hypodermatically for days, and the same was true of ergot. He had no food for four days, as he could not take it, having had several projectile vomiting attacks. His tongue was not badly coated, but he sometimes complained of a sore throat. There was no exudate in the throat. He had several ecchymotic patches on his arms and legs, and he often had abdominal pains and backache, at times he was a little deaf.

He had ice to his head and back and a hot water bag to his feet almost constantly. At times he had hot water bags all around him. His temperature was typhoid in type, and ended by lysis. He was sick for six weeks, very slowly recovered and very slowly convalesced. His heart became perfect, but his legs were stiff for weeks after he was out of doors.

CASE VII.—The patient is a man, 30 years of age, and was seen in consultation. He had had several days of irregular fever simulating malarial fever, with a temperature often as high as 105° F. He had petechiæ all over his body, absolutely no part of him that a finger could touch without covering a spot. His heart was very rapid and weak, he was deaf, very much excited, and very talkative. His fever, at the time I saw him, was not high, but he was breathing very rapidly, and examination of his urine showed acute nephritis. Two months before his urine had been examined and found normal. Ergot revived his flagging heart, and according to the report of his physician kept him alive for several days. He finally died of nephritis.

CASE VIII.—A boy, aged 10, was seen in consultation. He had been sick for two days, but the fever was not high. He was deaf and stupid, did not have a great deal of pain, and had no eruption. He could be slightly aroused, had some retraction of his head, and vomited frequently. The treatment was ergot and ice, and he recovered in ten days.

CASE IX.—A woman, 28 years of age, was seen in consultation. She had been sick for two weeks with irregular fever, pain in the joints, headache, and severe abdominal pains. She had severe dyspnoea, and examination of her heart showed pericarditis. The treatment was ergot, and ice over the heart. She recovered in three weeks.

CASE X.—A babe, ten months old, seen in consultation: The child was comatose, the eyes were crossed, the head retracted, the skin was dry and harsh. There was constant vomiting on the least movement of the child. The abdomen was shrunken and retracted. As there was some history of previous night terrors the surroundings of the patient were bad, and the child looked miserable and poorly nourished. I diagnosed a probable tuberculous meningitis. Ergot, potassium iodide, and ice to the head was the treatment. I thought the case was hopeless, but the child recovered and is well to-day.

CASE XI.—A man about 55 years of age. The disease started in with a severe headache, severe pain in both shoulders and arms without any swelling or joint symptoms. He also had pain in the back of his neck, slight fever, and was constipated. He was well in 48 hours. This was undoubtedly an abortive attack.

CASE XII.—A child, 5 years of age, taken suddenly with severe headache, pains in the abdomen, vomiting, slight stiffening of the muscles of the back of the neck, intolerance to light and noise, and a very slight rise in temperature. The treatment was withholding of food and administration of ergot. The child was well in a week.

CASE XIII.—A boy, aged 17, seen several times in consultation. He had been sick ten days with what apparently looked like an irregular, intermittent malarial

fever, having had several chills and rises of temperature. He suddenly became comatose, was almost absolutely deaf at the time I saw him, but could be aroused to extend his tongue. His heart was at that time normal and pulse tension augmented. Ergot rallied him and aroused him so that for a week he seemed to improve. This patient did not have much pain. The pupils at times were asymmetrical in size, and one of them would not well react to light. His comatose periods became less frequent, and his head seemed to be better, but his heart became weak, and he finally died in coma after a sickness of between three and four weeks. There were no kidney lesions.

CASE XIV.—A man, first seen by me after he had been ill for two months, his illness having begun with pains in his thighs and with contractions of the leg muscles. Twice he had apparently convalesced and gotten out of bed, to again grow worse and return to bed. At the time I saw him he had severe pains in the back of his neck, stiffening of the neck muscles, stiffness and adhesions of both shoulder joints, and was unable to move his hands across his body on account of the pain it gave his arms and shoulders. He had a very bad heart, with inconstant murmurs, was lying on four or five pillows, and had to sleep almost upright. He had a little cough without expectoration. Examination of his lungs showed consolidation at the back of both, with crepitant râles. He also had pains shooting down his legs, and some in his joints, but there was no joint swelling. His eyes were all right, but the reflexes were slightly exaggerated. His tongue was heavily coated, and there was almost a paralysis of the intestines. Examination of the abdomen was negative. He had the most profuse sweatings I have ever seen. To get any sleep at all required large doses of morphine. Every treatment had been instituted with no avail.

The previously attending physician, my associate, Dr. Bean, and two gentlemen whom I called in consultation all agreed with me that it was a case of general tuberculosis.

The treatment was ergot and yeast; the yeast cleaning his tongue, increasing his appetite, and moving his bowels perfectly, the ergot allowing rapid diminution and finally stoppage of the morphine. His only other treatment was iron. He was sick for two more months, then was up and about, stiff legged and stiff armed, and putting on weight rapidly. He has now been at work for several months, apparently perfectly well, and having perfect full movement of both arms and legs. The lungs are clean. It was a case of cerebrospinal meningitis.

CASE XV.—The patient, a young boy about eight years of age, was seen in consultation. He showed persistent vomiting, some deafness, some mental stupor, had high temperature, some stiffening of the back of the neck. The history of two days' illness began with an apparent cold. The treatment was ergot and ice. In three days he was comatose, the pulse exceedingly rapid and weak. This was made better by pushing the ergot hypodermatically. Spinal puncture was made and one c.c. of clear straw colored liquid withdrawn. The boy brightened, the pulse became immediately better. Ergot and ice were continued, and the child recovered without sequelæ.

Disseminated Sclerosis.—Bramwell, in the *Review of Neurology and Psychiatry*, calls attention to the extremely unfavorable prognosis of disseminated sclerosis, as sooner or later the great majority of cases pursue a progressive course from bad to worse. In some instances, however, the downward progress is interrupted by periods of improvement or complete remission of the symptoms. But they soon return with greater intensity and death follows early. In only very rare instances is the improvement lasting.

SOME NEWER VIEWS OF THE PRINCIPLES OF INFANT FEEDING AND HOW THEY MAY BE APPLIED.*

By HENRY DWIGHT CHAPIN, M. D.,

NEW YORK.

With the increasing numbers of bottle fed infants, there has been a larger demand for knowledge of how to satisfactorily feed the infants, and various methods of feeding have been presented for which great claims have been made and some of which have aroused great expectations.

Peptonized milk, sterilized milk, Pasteurized milk, home modified milk, laboratory modified milk, humanized milk, and various proprietary foods have all been in fashion but no one food has been discovered which will successfully compete with human milk.

While the experimental use of different foods has not resulted in the discovery of a process of making a thoroughly satisfactory substitute for human milk, much has been learned and the art of infant feeding has been greatly advanced, while the broad scientific principles on which all successful feeding is based are beginning to be grasped.

In the past the teaching concerning infant feeding has rested largely upon authority, and what was taught was often deemed secondary to who taught it. In other words, the character of the teaching was not so much considered as the reputation of the teacher. Owing to this state of mind on the part of the medical profession, the literature of infant feeding has become loaded down and clogged with a mass of obsolete terms and contradictory statements that serve only to foster controversy and make confusion worse confounded.

The profession at large is badly in need of first hand knowledge of the simple facts on which scientific infant feeding is based, so that they may use discriminating judgment and be able to apply principles and not be dependent on mere authority.

In the early attempts at scientific infant feeding all efforts were directed towards making something that had the same supposed composition as breast milk and which should look like it and resemble it in taste. Cow's milk was used as a basis as it contained the same gross elements as human milk, viz.:—fats, proteids, carbohydrates, mineral matter and water. As these food principles were not supplied in the same proportions in the two milks, an attempt was made to alter or modify cow's milk so that it should have the same composition as the breast milk, but cow's milk was not thus changed into human milk.

Fats, proteids, carbohydrates, mineral matter, and water are generic terms which are applied to the food of all forms of animal life and are not restricted to milk. Two persons may be eating at the same table the same quantities of fats, proteids, carbohydrates, mineral matter, and water, and yet the food of one may be beef steak

* Read before the Philadelphia Pædiatric Society, Dec. 12, 1905.

and potatoes and a glass of water; while the other may be eating bread and milk. From a nutritive, or food value, standpoint, these widely differing meals are alike and interchangeable, yet it is apparent that there is a great difference in the form in which the food elements are presented; and it is conceivable that there might be conditions under which the meal of beef steak and potatoes would be a very unsuitable diet and where the bread and milk might be just what was indicated. It would not be at all convincing to say that the beef steak and potatoes were as suitable as the bread and milk because a chemist had analysed them and found them to contain the same quantities of fats, proteids, carbohydrates, mineral matter and water as the bread and milk, but this is exactly the kind of reasoning that has been applied to infant feeding by many, and which has obscured the real points of importance.

Cow's milk and human milk are unlike in physical and chemical properties although they are both foods composed of fats, proteids, carbohydrates, mineral matter and water. Adjusting the quantitative composition of cow's milk to make it the same as that of breast milk does not alter its physical properties and make it like human milk any more than reducing the quantity of water in milk gives it the physical properties of beef steak.

Before any clear conception of infant feeding can be had, a knowledge of the general properties and functions of milk must be obtained.

Growth and nutrition begin when the ovum is fertilized, and from that time on until death there is a constant demand for fats, proteids, carbohydrates, mineral matter and water, but it is manifestly absurd to think that the same form of these food elements would be suitable for the developing ovum and the adult animal. It is observed in Nature that during the time the young are developing from the ovum to the miniature adult, the food elements are supplied in one or many forms by the parent. The form in which the food is supplied by the mother is particularly suited to the stage of development of the young, and changes as the young develop. When the infant or young animal is born it is attached to the placenta through which fats, proteids, carbohydrates, mineral matter and water have been supplied in the form of blood. At this time the digestive apparatus is not fully formed and is incapable of appropriating the food natural to the species. During the period the digestive tract is developing, mother's milk is the natural food for young animals. Chemically it is not essentially different from the food of the adult animal, and its fats, proteids, carbohydrates, mineral matter and water perform the same nutritive functions in the young animal as these elements of the adult's food perform in the adult.

Between conception and weaning nutrition is accompanied by rapid change of form and function. After weaning there is little change of form, and the functions are those of the adult on a small scale, and simple enlarging of all the parts is the chief phenomenon of growth. It is during the period when the digestive tract is evolving that great trouble is experienced in arti-

ficial infant feeding, and this is largely due to the failure to grasp the fact that the infant is undergoing a gradual metamorphosis and that milk besides being a food containing the fats, proteids, carbohydrates, mineral matter and water needed for nutrition, is a food peculiarly suited to this period of metamorphosis and has a property of changing its physical properties in various ways when it comes in contact with digestive secretions of different strengths. It is a food that is elastic in its physical properties. Other foods are fixed in their physical texture and only require digestion. Milk is changed into other forms by the digestive secretions before digestion commences, and it is because the form which milk assumes in the stomach of one type of animal is unsuitable for an animal with an entirely different kind of digestive apparatus, that milks are not interchangeable. The chemical problem is the same in all animals, both infants and adults, and is not difficult. The real difficulty is one of suitability of food for the different digestive tracts and their varying states of development.

Up to a certain point all milks are alike, but when it comes to the proteids, certain fundamental differences are noted. These elements show wide differences in the milks of different species of animals which have been quite unintelligible in the past, but can now be readily understood since the chemistry of the casein of cow's milk has been so thoroughly worked out by Van Slyke and Hart.

The proteids of cow's milk are made up principally of casein in combination with calcium or lime, and a group of albumin like bodies. When the milk comes in contact with the gastric secretions, the rennet acts upon the casein and lime compound and changes it into a paracasein compound; as soon as a very small amount of acid combines with some of the lime of the milk, the paracasein separates out as a very fine soft curd; as more acid is secreted, the curd becomes more dense. Pepsin will not act upon the very soft curd, which is suitable for intestinal digestion; but as soon as pepsin and hydrochloric acid are secreted, the acid combines with the curd and renders it more solid, and fits it for gastric digestion by pepsin. Free paracasein or chloride of paracasein are formed by the action of acid in the stomach before pepsin acts on the milk.

It is well known that ass's milk does not produce the same kinds of curds as those of cow's milk and neither does human milk. Cow's, goat's and sheep's milk all produce the same kind of curds. A little close study makes plain why this is so. The human digestive apparatus and that of the ass are not at all like that of the cow and human milk and ass's milk are not like cow's milk in their curding properties; but the goat and sheep have the same type of digestive apparatus as the cow and their milks have the same curding properties as cow's milk. It is easy to see therefore that milks have different properties to enable them to fit and develop different kinds of stomachs.

It is in the caseins of milks that their principal differences of properties lie. It has been generally understood that the caseins of all milks

were alike and the use of the word casein in connection with all milks has been unfortunate and confusing. Many have been taught that the differences between milks lay in the relative amounts of casein and albumin present. Whey and cream mixtures are based on this belief. Many of the textbooks state that there is a definite ratio between casein and albumin in human milk and cow's milk, but Van Slyke after examining about 100,000 quarts of milk obtained from 1,800 different cows during an entire season, to see if there was a ratio of five parts of casein to one part of albumin as taught, found that the ratio between casein and albumin was an exceedingly variable one, or to quote him, "Taking the amount of albumin as one, casein varies all the way from 2.6 to 5.6, the average being about 3.6 parts of casein to one of albumin," so even from the chemist's standpoint the whey mixtures have a rather insecure scientific basis. The caseins of milks are different for a purpose, and this purpose is to enable them to develop the particular digestive tracts for which they were intended. It is about time that the attempts at making an imitation of human milk were given up and the fact recognized that all methods of infant feeding resolve themselves into supplying sufficient nutriment and in some way trying to adapt it to the developing digestive tract.

As the casein of every milk is changed into a solid or semisolid mass by the gastric secretions before digestion commences, it is evident that nature supplies casein for the purpose of training the stomach to digest solid food and it is rational to conclude that milk should be the basis of every normal infant's food; and all experience shows that the best development attends milk feeding.

After milk has been modified from the nutritive or food value standpoint by quantitative rearrangement of the fats, proteids, carbohydrates, mineral matter and water, a mechanical or chemical modification of the casein of cow's milk is almost invariably made, although comparatively few realize the fact, it being masked by misleading statements, the result of the erroneous teachings of the past.

Casein of cow's milk exists in fresh milk in combination with lime. If lime water is added to fresh milk the lime of the lime water combines with the casein of the milk and forms a new compound which has none of the properties of the original casein. It will not form a curd with rennet in the stomach until enough acid is present to displace the lime. Potassium carbonate in very small amounts also combines with the casein and has the same effect, also sodium bicarbonate. The addition of these substances, which has been strongly advocated by some, for the purpose of making cow's milk alkaline, really has a marked effect on the casein and completely changes its properties; this fact should be better known and alkalies should be added for their specific action and not as a fixed routine procedure without any definite idea as to their effects. Sodium citrate (one to two grains to an ounce of milk) added to cow's milk removes the

lime from combination with the casein and substitutes soda. Casein in combination with soda has none of the curdling properties of fresh milk and milk so treated remains perfectly fluid in the presence of strong rennet ferments. Peptonizing milk also prevents the formation of curds.

We rarely use peptonized milk as a steady diet, but only where it is indicated. It is important that we should learn to order alkali additions to milk, or sodium citrate, only when they are indicated and not feel that every mixture needs them. Acids added to milk cause the lime combined with the casein to combine with the acid and afterwards the casein combines with acid and forms sour milk curds. This is what takes place in the production of buttermilk. When buttermilk comes in contact with rennet ferment of the stomach it will not form a curd like sweet milk, so its use can be understood better when this fact is kept in mind.

When gruel diluents are added to milk, the gelatinized starch of the plain gruels, or the flocculent proteid of digested or dextrinized gruels, is dispersed through the milk and when the rennet has acted on the casein, it is found that the casein curd is very finely divided by the cereal addition and rendered softer and more digestible, so this is a purely mechanical method of modifying the casein.

Under the older teaching about all that the student had in mind was the making up of a food mixture on about the following basis:—rearrange the quantitative composition of cow's milk and add a fixed amount of alkali to every mixture, no matter how much or how little milk it contained. If this food did not suit, try different combinations of the food elements and alkali. Beyond this point all was uncertain and not to be recognized as scientific.

In the future the subject will undoubtedly be presented on about the following lines: The infant needs fats, proteids, carbohydrates, mineral matter and water, but in this respect does not differ from the adult. As the infant's digestive apparatus is not fully formed it needs these food elements in peculiar forms which are adapted to a developing stomach. Milk is the natural food for this period of development. As animals grow with different degrees of rapidity, and as their digestive tracts show wide differences in form and function, milks of different species of animals are not interchangeable either from a quantitative composition standpoint or in their digestive properties. Rearranging the percentage composition of cow's milk does not give it the properties of human milk. To make it acceptable to the infant the casein must be also modified. Just how this should be done is a matter for the physician to determine on the spot and according to the nature of the case. It may be that when the stools are very curdy, the addition of lime water, sodium bicarbonate, or potassium carbonate to make the milk decidedly alkaline and thus change the casein into an alkaline compound that will not be acted upon by the rennet of the stomach, may be indicated; or sodium citrate may be added, or the milk may be peptonized. Under normal conditions it would seem better to me-

chanically alter the casein by the use of gruel diluents and allow the gastric function to be performed naturally.

When it is found impossible to nourish the infant by the use of cow's milk modified in any of these ways, recourse may be had to vegetable foods as for instance the legume flour gruels, being careful to supply sufficient quantities of fats, proteids, carbohydrates, mineral matter and water to ensure proper development.

With such an idea before the practitioner, every case treated will be an education and tend to bring out clearly the indications for the different methods of feeding and not foster the belief already too prevalent that there are no scientific principles involved in infant feeding.

In home modification of cow's milk there is one point that cannot be brought out too strongly and that is the fallacy of attempting to work on a basis of creams or top milks of definite percentage composition. It has been taught that certain creams or top milks contained definite quantities of fat. This was undoubtedly the case with the specimens used, but milk and the methods of handling it vary greatly. Years ago milk was set in shallow pans to allow the cream to rise. To-day this is not done but the terms employed under this method are not yet out of use. Next it was found that milk in tall narrow vessels creamed better than in shallow pans, and the deep setting process of creaming came into use and is seen every day in the rising of cream in quart bottles of milk. Then centrifugal creams appeared and a new set of terms came into use. The terms applying to all three methods are used indiscriminately, and the peculiarities of each kind of cream are not generally known.

For home modification, bottled milk will be used to the exclusion of nearly all other kinds, and this fact might as well be recognized and the literature based on it. Cream varies with the kind of cow the milk is derived from, and no end of contradictory results will be obtained if a dozen quarts of milk are skimmed and the cream tested for fat. Then again milk from Jersey cows is much richer in fat than milk from other breeds of cows, and more cream will rise on such milk than on poor milk, so it is useless to look for the same amount of cream, or cream of the same richness, on every part of milk, or to expect that a certain layer of top milk will contain 8, 10, or 12 per cent. of fat no matter what milk is used. Some milks will give a top milk containing 10 per cent. of fat where a 6 per cent. top milk was intended to be used. If one milk is twice as rich in fat as another, after the cream has risen, the top milk of one will be twice as rich in fat as the other. Many disappointing and confusing results are undoubtedly due to this cause, and as high as 9 per cent. of fat in the infant's bottle, where 4 per cent. was intended, has been the result of calculating that cream and top milks had definite compositions.

It is a very simple matter to avoid this difficulty and use any milk in home modification. Cream rises quite completely in milk bottles which represents the deep setting method of

creaming. After the cream has risen, the under milk contains usually less than 1 per cent. of fat, and it has been found by a great many observations on all kinds of milk, as delivered to families, that the proportion of fat in the top nine ounces of a quart of milk, after the cream has risen, is about or almost exactly three times the percentage in the original milk; the top fifteen ounces are about twice as rich in fat as the original milk, and the top twenty ounces, one and one half times as rich in fat. For instance, if the original mixed milk contained 3 per cent. of fat the top nine ounces will contain 9 per cent., the top fifteen ounces 6 per cent., and the top twenty ounces will contain 4.5 per cent. of fat. If Jersey cows' milk containing 5 per cent. of fat was used, the top nine ounces would contain 15 per cent. of fat, the top fifteen ounces 10 per cent. of fat, and the top twenty ounces 7.5 per cent. of fat, after the cream had risen. These various layers may be easily and accurately removed by the author's cream dipper holding just an ounce.

In practice the physician who felt that the fat in a mixture should be increased would use successively plain whole milk, then top twenty ounces, then top fifteen, and later top nine ounces for dilution. It is immaterial to him what proportion suits the infant; what he wants is an easy accurate method of shifting proportion or quantities of fat. Proteids are easily regulated by varying the dilution of the milk.

Whenever a young physician who has been taught the method of using a top milk of supposed definite composition, of a certain layer or quantity, tests the milk he is using he generally finds that all of his fine calculations have been wasted, for his milk has not been what he was taught to believe it was, and it is not at all surprising that the whole subject is thrown aside in disgust and a doubt as to the correctness of other teachings creeps into his mind.

In the future the teaching must be less dogmatic and more demonstrations must be given of the properties of milk and the effect of the different methods of modifying it.

Finally, the whole subject must be studied by biological methods if we wish to thoroughly understand the possibilities and limitations of artificial infant feeding.

51 WEST FIFTY-FIRST STREET.

REMARKS SUGGESTED BY AN EXPERIENCE OF SIXTY-SIX OPERATIONS FOR FRACTURE OF THE SKULL.*

By GEORGE TULLY VAUGHAN, M. D.,

WASHINGTON, D. C.

Fractures of the skull naturally derive their importance from the coincident damage received by the brain, and the degree of such damage is often difficult to determine without operation. I have followed the rule so far as to operate in every case in which there was evidence of injury to the brain, and in nearly all cases of depressed fracture, with or without brain symptoms. The list includes four

*Read at the meeting of the Medical Society of Virginia, Norfolk, Va., October 24-27, 1905.

cases in which there was no fracture, but operation was done on account of symptoms indicating injury to the brain.

Varieties.—Of the 66 cases operated in, 51 were compound fractures, 11 were simple fractures, and 4 were contusions with hæmorrhage in the brain without fracture. All were fractures of the vault and 5 had, in addition, fracture of the base. In 29 cases the dura was torn open and in 23 cases the brain was injured, torn, or a portion destroyed.

Ætiology.—Age: The age ranged from 4 months to 70 years. Under 10 years of age, 2; 10 to 20 years of age, 10; 20 to 30 years of age, 24; 30 to 40 years of age, 14; 40 to 50 years of age, 5; 50 to 60 years of age, 26; 60 to 70 years of age, 3; over 70, 2. It is seen that 57 per cent. occurred during the active period of life, between 20 and 40 years.

Sex: The proportion of male to female was 10 to 1. 60 males and 6 females.

Race: The white patients numbered 28 and the negroes 38.

Bone fractured: Of the 62 patients whose skulls were fractured there were 33 fractures of the parietal, 22 of the frontal, 18 of the temporal, 3 each of the occipital, sphenoid, and ethmoid, 2 each of the nasal and superior maxillary, and 1 of the inferior maxillary bone. Over one third of all fractures were of the parietal bones.

Kind of violence: In 38 cases the patients were struck with some comparatively small object, as a hatchet, hammer, cleaver, pick, shovel, club, crank, poker, stick, tamping iron, stone, brick, or flatiron. In 21 cases the injuries resulted from the patient striking objects, so to speak, as from falls on the pavement, from bicycles, buggies, cars, horses, trees, down elevator shafts or from collision with engines, street cars, etc. Five cases were caused by gunshot wounds, 1 from explosion, and 1 from the kick of a horse.

There was not recognized any clear case of fracture by contre-coup, although one case of laceration of the brain apparently by contre-coup was seen.

This was in a white man, 70 years old, who was knocked down by a vehicle, and sustained a compound fracture of the left temporal bone. Unconsciousness did not come on for five or six hours. When seen he was profoundly unconscious with spasms of both arms and both hands, both pupils slightly dilated. The skull was opened at the site of the fracture and an extradural clot removed. There was no external sign of injury to the other side of the head. Consciousness followed and lasted two or three days, when he again became unconscious and died ten days after the injury. The necropsy showed a laceration of the brain and a clot on the right side, but no fracture of the skull on this side.

One case might have been considered an example of fracture by contre-coup, but it seems more probable that it was an extension of a line of fracture from before backward through the base.

The patient was a brakeman who was struck on the forehead by an overhead bridge while riding on the top of a car. He was unconscious for several hours and in a semiconscious condition for two days. The skin of the frontal region was contused and swollen, both eyes were bloodshot and closed by the swelling. There was bleeding from nose, mouth, and from both ears, and from the right ear a thin fluid was discharged, evidently cerebrospinal fluid. He did well after the

first two or three days until eleven days after the injury when the discharge from the right ear became purulent, there was severe pain in the ear, elevation of temperature and pulse, and œdema and tenderness above and behind the ear. Operation fourteen days after the injury revealed a fracture of the mastoid and petrous portion of the temporal bone and pus between the bone and the dura mater and in the mastoid cells. Recovery followed.

That a blow on the head can produce severe and even fatal laceration of the brain and hæmorrhage, without fracture of the bone, is proved by the notes on two cases. This is in accordance with Felizet's experiments proving the elasticity of the skull; the skull is probably depressed by the blow sufficiently to lacerate the brain but itself does not break and returns to its normal shape.

CASE XI.—A white boy, eighteen years, was struck on the head with a stick. He was knocked down, but was helped up and walked a short distance when he sank down completely unconscious. When seen one hour later he was profoundly unconscious, breathing deep, sometimes sighing, pupils dilated and irresponsive to light, pulse 60 and full, right arm and leg and sometimes the left arm affected at short intervals with spasms, and face turned persistently to the left side. A small contused wound was seen just above the left ear. A large opening was made in the skull just under the scalp wound. The dura bulged into the opening. It was incised and a blood clot as large as an orange popped out. A freely bleeding artery on the surface of the brain was ligated, but the brain did not pulsate. A grooved director was passed into the brain tissue in the direction of the lateral ventricle, but no fluid appeared. The only change produced by the operation was contraction of the pupils. Death occurred two hours later.

CASE XLI.—A white man, about forty years, was placed in a cell by the police who thought he was drunk. As there was no improvement next morning, he was sent to the hospital. He was profoundly unconscious. Right pupil moderately dilated and irresponsive to light, left pupil contracted, but responsive. No paralysis of extremities, except left arm, which was paralyzed as to motion and sensation. A contused wound was found above and behind the left ear. A diagnosis of hæmorrhage over the left arm centre was made and the skull was opened on the right side; this was regarded as a case of injury by contre-coup. An extensive subdural clot was evacuated and a laceration of the brain surface was found. A grooved director was thrust into the brain tissue, 2.5 inches in the direction of the right lateral ventricle, but no fluid flowed. No material change resulted from the operation and death occurred twenty-four hours later. Necropsy revealed a blood clot about the size of a tennis ball in the right lateral ventricle, but no sign of fracture of the skull.

Diagnosis.—In compound fractures there is usually no difficulty in ascertaining the existence of a fracture, but this is not easy in many cases of simple fracture. However, this is not so important as at first sight might appear, because it is the evidence of injury to the brain which in many cases decides the question of operation regardless of the existence of fracture.

Treatment.—Patients were operated whenever it was thought there was the slightest chance of saving life, so that many almost hopeless cases were thus treated with the inevitable result of increasing the mortality. The operation was usually performed as soon as possible after the receipt of the

injury. In eleven cases, 16.66 per cent., no anæsthetic was necessary, as the patient was already unconscious. As a rule chloroform was used when an anæsthetic was required, on account of the less tension and congestion of the brain following its use as compared with that of ether. When the heart was especially weak, ether was given. Chloroform was given to 51 patients and ether to 4 patients. As a rule, the head should be shaved all over, in order to diminish as much as possible the chances of infection.

The indications are: (1) To arrest bleeding; (2) to prevent or remove infection; (3) to remove the cause of compression, blood clot, fluid, depressed bone, or other foreign material; (4) to provide for drainage when necessary; (5) to avoid unnecessary destruction of bone; and (6) to prevent hernia cerebri.

Often the operation consists simply in enlarging the wound in the scalp, elevating depressed bone or removing it, and closing the wound. Any operation by which the skull is opened by use of the trephine, chisel and mallet, saw, or simply by removing fragments of bone, is known as trephining, that term being no longer limited to the operation in which a trephine is used.

In depressed fractures it is seldom necessary to make an additional opening for the purpose of raising or removing the depressed bone. This can be done by insinuating the end of a vectis or elevator into a crack between the fragments, by seizing the edge of a fragment with strong bone forceps, or when no opening exists, by chiseling or biting off with bone forceps the edges of the fracture until an elevator can be introduced.

In an infant with a thin skull, the bone is sometimes depressed without fracture and may be restored to shape by pressure with the fingers around the edges, much as one might remove a dent from a hollow celluloid ball. In my patient, 4 months old, such a depression existed without fracture, but it could not be removed until a small opening had been made with a trephine near the depression and an elevator introduced. The opening may be enlarged by biting off fragments of bone with rongeur forceps.

When operating for hæmorrhage or compression on cases in which there is no depression, or when it is necessary to expose a large surface of brain, the osteoplastic flap is best. This I prefer to make with the Devilbiss bone cutter. The incision through the soft parts is made, a small opening is made in the skull with a quarter-inch trephine in order to introduce the bone cutter, then an oval or omega shaped flap can be rapidly cut in the skull and the base or narrowest part of the flap can be broken through by turning back the entire flap consisting of scalp and bone, thus exposing the dura mater over an area of from four to twelve square inches.

Hæmorrhage from the scalp is arrested by clasp ing the vessel through the entire thickness of the scalp and then securing it with a suture ligature of catgut, as it is almost impossible to seize and ligate the vessels of the scalp in the usual way. Hæmorrhage from the diploe is probably best arrested by mashing the edge of the bone with forceps, or by plugging with a fragment of soft tissue. Hæmorr-

hage from the brain and its membranes may often be arrested by gentle pressure.

When ligation of vessels is necessary, fine catgut in a curved round needle is used, introduced and tied with the greatest care and gentleness, otherwise they will cut through the vessels and increase the difficulty.

Fragments of bone should be carefully sought around the edges of the fracture, either by sweeping the finger or a bent elevator around beneath the bone. Fragments of bone buried in the brain can be best detected with the finger, being careful to injure the brain as little as possible, when they can be seized with forceps and removed. In Case LVII, ten fragments of bone, buried in the brain to a depth of one to one and a half inches, were thus removed.

Drainage is necessary in extensive laceration with much hæmorrhage, when infection is probable, and when gauze has to be packed in to control oozing or to prevent hernia. For this purpose I have always used iodoform gauze. To prevent hernia cerebri, avoid, if possible, wounding the brain tissue, as this complication cannot arise unless the brain is injured. The dura mater should always be closed, if possible, in order to protect the brain and prevent the formation of a hernia. In extensive laceration of the dura mater and of the brain, packing with iodoform gauze will usually prevent the formation of a hernia and if it forms it can usually be controlled by firm packing of gauze. Several cases were successfully treated in this way, the only failure being in a patient who left the hospital and did not have proper treatment. The lateral sinus and the longitudinal sinus were each opened once and in both cases the hæmorrhage was arrested by tight packing with gauze. In the case of the longitudinal sinus, hemiplegia resulted but passed away shortly after the packing was removed.

Exploring the lateral ventricles. The lateral ventricles were explored in four patients in the hope of evacuating fluid and thereby relieving the compression. No blood was thus removed although in one case the grooved director passed into a right lateral ventricle which contained a clot as large as a tennis ball. It is obvious that a grooved director could only remove blood when in a fluid state and as in these cases it is always clotted it could only be removed by making a larger opening which might be as dangerous as the existence of the clot. In two patients serum was thus removed. This was immediately followed by relaxation of the opposite arm, which had previously been rigid. In one patient there was a rigidity of the right arm in addition to other symptoms of hæmorrhage. This rigidity of the arm was construed as meaning distention of the opposite lateral ventricle. So the left lateral ventricle was tapped with a grooved director and considerable serum evacuated. At the necropsy the right lateral ventricle also was found distended with serum, yet there had been no rigidity of the left arm.

Mortality.—There were 20 deaths in 66 operations—30 per cent.—which looks like a high rate of mortality, but such injuries unselected always have a high mortality. The patients died, not

on account of, but in spite of, operation. If the cases which died within three days after the injury be excluded, as they were practically hopeless from the beginning, this would leave 52 cases with six deaths, a mortality of 12 per cent. These six deaths occurred at periods of from four days to four months after the injury. Of the fractures of the base as well as of the vault there were five cases with four deaths, a higher mortality than when the fracture involves the base alone.

Prognosis.—Certain symptoms and other conditions would seem to influence the prognosis, for example, whether or not the dura mater is opened, whether the cerebral tissue is or is not lacerated, whether or not there are convulsions or unconsciousness. In 29 cases in which the injury opened the dura there were 12 deaths, as compared with only eight deaths in 37 cases in which the dura was not opened. In 23 cases with laceration of the brain there were 15 deaths, as compared with only five deaths in 41 cases in which the brain was not lacerated. In nine cases in which convulsions occurred there were four deaths. In 26 cases in which there was unconsciousness there were 14 deaths, while in 40 cases without unconsciousness there were only six deaths. There were five gunshot wounds of the skull with three deaths. A striking difference in mortality is seen between fractures caused by small objects, such as hammers, sticks, etc., and fractures caused by fall, collision, etc. Of the former there were 38 cases with eight deaths, mortality 21 per cent., whereas of the latter there were 21 cases with nine deaths, a mortality of 42.8 per cent.

1718 J STREET.

OSSICULECTOMY UNDER LOCAL ANÆSTHESIA IN THE TREATMENT OF CHRONIC SUPPURATIVE OTITIS MEDIA.

By MILTON J. BALLIN, M. D.,
NEW YORK,

ASSISTANT SURGEON, NEW YORK OPHTHALMIC AND AURAL INSTITUTE, ETC.

Ossiculectomy, or the removal of the small bones of the ear, either to improve the hearing function and subjective noises, or to bring about a cessation in the discharge, is not of recent date but was already carried out in the beginning of the last century. When we speak of ossiculectomy we use the term in a rather broader sense, meaning the removal of all three ossicles; this, however, is not the case, as in reality we endeavor to extract either the malleus alone, or in combination with the incus. It has been found both by experimental and clinical experience that the removal of the stapes is usually followed by symptoms which are most unpleasant to the patient, and which often last for a considerable length of time; so that further attempts in this direction have been abandoned. That operative measures in the tympanic membrane and in the ossicular chain have been carried out years ago, we are all aware of, yet it may be well to go back to the early part of last century and review the steps which gradually led up to the present ideal method of

ossiculectomy, as recently proposed and so successfully preformed by Neumann, of Vienna. The early attempts were not very encouraging owing to the fact that the operation was performed rather indiscriminately in all cases of middle ear sclerosis, with the view of bringing about an improvement in the hearing, while in recent years, however, it has been carried out in chronic suppurative cases to bring about a cessation in the discharge, with much better results.

If, therefore, we look back to the time when our first attempts at surgery were introduced into otological practice we find that they were limited merely to the operation of partial excision of the drum to bring about an improvement in the hearing. This was first performed by Himly and Astley Cooper (1800-1804) who advanced the theory that the hearing would no doubt be greatly improved if the sound waves could pass directly to the promontory and thus act upon the windows of the labyrinth. They were correct in their theory and found that after making perforations in the drum the patients were greatly benefited, so that they performed partial excision of the drum in a large number of cases. The improvement which followed was, however, only transient, and the good results obtained were soon lost, owing to the fact that the opening closed again within a short time as there was no means by which it could be kept patent. This failure soon placed the operation in disfavor and it was abandoned for the time being.

In 1841 Fabrizi described his method which was similar to that of Himley and Cooper, but the outcome of his endeavors were no better than those obtained by his predecessors, as the perforations in the drum soon closed and the hearing again returned to its former state. As the results were not as encouraging as expected, the operation was laid aside for some years and it was not until 1863 (1) that Gruber again revived it and applied to it the term "myringectomy." The results obtained by Gruber were good at first, but in the course of time the cases he operated upon soon lost their beneficial effect, in that the hearing and subjective noises returned to their previous state, owing to the same cause as heretofore, namely the inability to keep the perforation open.

Some years later Wreden (2) who had been carrying out a number of these operations came to the idea that if he also removed the handle of the malleus the blood supply to the membrane would be greatly diminished, which would in some measure retard the regeneration of the lost tissue. This procedure he called "sphyrotomy," but his failure to bring about the desired result soon convinced him that the operation was of little value and it was therefore given up.

It was frequently observed that, in a great number of cases of chronic suppuration in which one or more of the ossicles was expelled spontaneously, the hearing still remained very good. Encouraged by these observations Schwartz (3) conceived the idea that if he removed the drum with the entire malleus he might be able to bring about an improvement in the hearing and a diminution in the subjective noises, and even, in cases in which there was a discharge, a cessation of the same.

In 1873, therefore, Schwartz carried out quite a

number of these operations and his results as to an improvement in the hearing and subjective noises were fairly good, still they were not up to his expectations, as his failure to keep the perforation open was again the main factor in preventing his success. In some cases, however, in which the discharge was kept up by the necrotic hammer an improvement was obtained after its removal, but inasmuch as the necrosis extended further in the great majority of cases, the beneficial effects were only temporary.

Five years later, in 1878, Kessel (4) proposed a method by which he endeavored to overcome the disturbing factor of closure of the perforation by removing the limbus cartilagineus in the posterior part of the drum and eventually resecting a portion of the sulcus tympani by means of a small chisel. Even this did not bring about the desired result as the edges of the perforation would not cover with epidermis; so that Kessel's attempts were successful in only a very few cases. He performed these operations with the view of improving the hearing by mobilization of the stapes in chronic cases of deafness, in which the Eustachian tube was occluded.

It will be seen that all operations were directed thus far to the hammer and the tympanic membrane, but a year later, in 1879, Kessel as well as others such as Flourens, Faraci, Botey, Ricardo, began to make experiments on birds and rabbits by extracting the stapes. In all these animals deafness ensued, followed by an escape of perilymph from the labyrinth. In a short time the hearing again returned and the animals once more became sensitive to sound; this was due to the fact that the fenestra vestibuli was again closed by a newly formed membrane. Based on these experiments, Kessel first performed extraction of the stapes in the living, but with no beneficial results, as it was difficult to carry out, owing to the hæmorrhage which generally ensued, and was often followed by unpleasant results. Besides, the operation was accompanied by danger of injuring the utricle, which could give rise to a suppuration of the labyrinth causing a destruction of the nerve with resulting deafness, and passing over to the base of the brain, giving rise to a fatal meningitis. Discouraged by the unfavorable results, Kessel soon put aside this procedure and it was not resumed until a recent date. This will again be spoken of more fully later on.

Operative measures were now carried out by various surgeons in different countries, in the chronic catarrhal conditions, and foremost amongst them was Lucae, of Berlin, who, in 1885, (5), published a series of 53 cases. He found that there was a marked improvement in nine cases; a slight improvement in nineteen cases; no improvement in eighteen cases, and a change for the worse in seven cases. In only nineteen cases did he observe the tinnitus; in one it remained away entirely; in seven it was lessened; in ten it remained unchanged; in one it changed to an unpleasant ringing but the hearing improved.

If we analyze this report we find that the results obtained by Lucae were not very satisfactory so that he no longer performed this operation in cases of

this nature. While Lucae was carrying out this line of work, otologists in this country were also working in this direction and we find Sexton (6 and 7), of New York, recommending excision of the entire membrana tympani with extraction of the malleus and incus in all cases of dry middle ear catarrh associated with progressive deafness, marked tinnitus and dizziness, in which local treatment yielded no beneficial results. He advised this to be done, however, in such cases in which there was a striking improvement in the hearing or a diminution in the subjective noises after artificial perforation of the drum with the galvanocautery. He also performed ossicectomy in cases of long standing suppuration but not being always able to remove the incus which is so often effected, his results were not, at all times, very satisfactory. Still, Sexton thought he had relieved the annoying subjective noises and dizziness in quite a number of his cases and also to have improved a discharge of the ear of long duration, so that his attempts were successful to a certain degree; but failed utterly to bring about an improvement in the hearing by this means, for which the operation was originally intended.

In 1887 we find that Stacke published ten cases in which he removed the hammer alone (8). He recommended this operation in two classes of cases: 1. In those cases in which the operation was performed on pure surgical principles, and, 2, in those cases in which there were peripheral disturbances in the hearing function. These indications were often applicable, however, to the same case. For Stacke further states that if one has to deal with a tuberculous affection of the hip joint one has to resect it to hope for a good result, and in like manner if the hammer is diseased, a cure can be expected only by its removal; so that Stacke recommended this operation as a preliminary measure in all cases in which the suppuration had its seat in the upper portion of the tympanic cavity, and in which the free outflow of the pus was hindered. As to the hearing, one must be very guarded; but the results obtained by Stacke after this operation were very gratifying in many of his cases, so that whispered speech was often perceived even at 6 to 8 metres. If we have to deal, however, with a case of sclerosis of the entire middle ear, so called otosclerosis, one can assume with certainty that there is, in addition to ankylosis of the hammer, a fixation of the foot plate of the stapes, so that extraction of the former would not be followed by any improvement in the hearing. Since, therefore, the results show that after the operation one may still have a hearing distance of 6 to 8 metres in favorable cases, one is justified to perform extraction of the hammer even when the hearing is still good, as it is more important to try to bring about a cessation of the suppuration which is often most dangerous to life, with the hope that the hearing may remain as before or may even be improved.

Stacke's results were, on the whole, very encouraging, as he not only brought about a cessation of the discharge but also an improvement in the hearing, so that he advised excision of the hammer in all cases in which there was an impairment in hearing due to fixation of the hammer and in cases in which there was an adhesion of the hammer and

tympanic membrane with the promontory, as is observed after suppurations and neglected middle ear catarrhs.

We therefore notice that Stacke was really the first to perform ossicectomy more for the purpose of bringing about an arrest of the chronic otorrhœa, than to improve the hearing. Shortly after these publications we find others advocating this operation such surgeons as Luc, Ludewig, Burnett. The last of these recorded a case in 1889 (9) of chronic otitis media purulenta with perforation of Shrapnell's membrane and caries of the head of the hammer, in which he removed the membrane and hammer, and not only put an end to the suppuration but also noticed a marked improvement in the hearing; this was almost nil before the operation and increased to 2 to 3 feet for whispered, and 12 feet for ordinary speech. Burnett went even further and claimed to have stopped the suppuration in nearly every case in which he performed ossicectomy. This the writer thinks rather extreme, as there are many cases met with in which the suppuration does not cease after the removal of the hammer and incus, as one cannot tell in advance how far the necrotic condition extends. A cessation of the discharge occurs generally only in those cases in which the disease is limited to the ossicles themselves.

In the following year, namely, in 1890, Ludewig (10) published a very excellent paper in which he was the first to show that the great majority of chronic suppurations of the middle ear were due to a necrotic condition of the incus, and pointed out that, although this bone could not, as a rule, be seen or probed, it was, nevertheless, often the seat of caries and most often the cause of the disorder. Inasmuch as this organ no longer functionated when diseased, and as no disturbance in the hearing was brought about by its extraction, Ludewig recommended that in all cases of suppuration the hammer should be removed. In his report of 32 cases he found: the incus carious with hammer intact eleven times, 34 per cent.; the incus carious with hammer also, sixteen times, 50 per cent. Hence it will be seen that the incus was carious twenty-seven times (or 84 per cent.) in 32 cases. In two cases it was normal, once with, and once without, a diseased condition of the malleus. In two cases it was missing (?) and in one case extraction was stopped because twitchings of the facial nerve were observed, yet paralysis ensued after the operation. This report of Ludewig is very interesting as it shows the great frequency of caries of the incus and makes it very apparent that in all chronic suppurations of the middle ear we must not fail to remove both ossicles if we wish to get a favorable result.

As to the hearing, Ludewig found an improvement in sixteen cases, a change for the worse in three cases, no change at all in nine cases, and gives no record in four cases; so that it will be seen that nearly 50 per cent. of his cases were improved which is indeed very gratifying. In the next year he again published a series of cases in which ossicectomy was performed, making his total number 75, and, in all, caries of the incus was found 64 times or about 85 per cent.

Stacke (11) now went a step further in cases of

chronic suppuration using more radical measures; he advised removal of the hammer and incus but also advocated the chiseling away of the external wall of the attic. In order to gain a better view of the field of operation he was the first to detach the auricle and in this way to gain an entrance to the middle ear. His cases were usually followed by success and he thus established the so called Stacke operation which was the nucleus to the more extensive mastoid operations which followed a short time after.

The operation of ossicectomy was by this time universal and was extensively performed in this country by various operators. We find cases reported by Dench (12), Richardson (13), and others.

The writer has thus endeavored to give a brief history of the operation of ossicectomy in order to show, how by gradual development from the earliest stages in which operative measures were first limited to the tympanic membrane, the operation has grown by successive steps and has finally reached a stage in which it can be carried out with comparatively no discomfort to the patient under local anæsthesia as devised by Neumann, of Vienna. If we recall the outcome of the early operations we find that it was not very encouraging, and that this was no doubt due to the fact that ossicectomy was performed in the great majority of cases of chronic middle ear catarrhs and otosclerosis in which an improvement could not have been expected. It was not until a later period when the operation was advised in chronic suppurative cases to bring about a cessation of the discharge that it gave satisfaction and proved of great value as a therapeutical measure.

That it is not employed as often at present as in former years can perhaps be explained by the increasing popularity of the radical mastoid operation after the introduction of Stacke's method in 1891, for the results as far as checking the long lasting discharge have, on the whole, proved very satisfactory, and if we compare the various reports we find that Grunert (14) obtained 55 per cent. cured and 44.5 per cent. failures. In a like manner Burnett averaged a very high proportion of favorable results, and Gomperz (15) also speaks in high praise of ossicectomy in the chronic suppurative cases.

It will be noticed that in all these operations the stapes was not removed. For Kessel, as far back as 1877, showed that nothing was to be gained by this procedure and that it was often followed by most annoying symptoms, such as dizziness, headache, nausea and vomiting, which often lasted a considerable length of time. The hearing, as a rule, became worse and in some instances was even lost entirely. The operation was performed by Dench (16), Jack (17), and others, and Blake, of Boston, (18), who is supposed to have performed the greatest number of extractions, saw without exception a change for the worse. The operation being universally condemned on account of its dangers and unsatisfactory results, it is rarely practiced at present, and we now limit our operative measures merely to the hammer and incus.

An important factor to which we must call the

reader's attention is that the operations were always performed under a general anæsthesia, and when cocaine was introduced into practice it began to be employed in various operations of the ear, in the form of powder and instillations in solutions varying from 1 to 20 per cent. in strength. These, however, have proved inadequate in the great majority of cases, and especially so in ossicectomy in which we must have complete anæsthesia. This, however, was not the fault of the medicament but, as we will see later, of its method of application.

Gomperz, owing to the intimate relation of the blood vessels and lymphatics of the external auditory canal and middle ear, came to the idea that by injecting some anæsthetic into the walls of the meatus we could produce a complete loss of sensation in the middle ear. He was correct in his supposition, but having used Schleich's mixture he did not get the desired result. Neumann (19) again took up this matter and substituted a combination of cocaine and adrenalin for the Schleich's mixture, and found to his surprise that when he injected this solution into the superior wall of the meatus he not only obtained a complete anæsthesia and absence of hæmorrhage in the external meatus, but also in the entire middle ear and its contents. This injection method of Neumann therefore completely revolutionized the operation of ossicectomy, so that we have now at our command an ingenious, ideal operative procedure, which can be carried out with absolutely no pain to the patient, without a general anæsthetic, is not accompanied by hæmorrhage to obstruct the field of operation, and is, as a rule, followed by no unpleasant sequela, yielding in the great majority of chronic suppurative cases most gratifying results.

The writer, while working again at Professor Politzer's clinic last summer, was greatly impressed by this new method of ossicectomy as performed by Neumann, and by the excellent results obtained by him in chronic suppurations of the middle ear. Neumann does not confine this operation merely to the removal of the hammer and incus, but also performs Stacke's operation of removal of the external attic wall without detachment of the auricle. This surprising fact that we can operate so extensively in the middle ear without the least annoyance to the patient and without the slightest hæmorrhage, and the excellent results obtained by Neumann, induced the writer to perform this injection method in a number of cases. He has found it to be a most excellent therapeutical measure to bring about a cessation of a long standing otorrhœa.

The indications for performing ossicectomy are quite numerous and had already been given by Schwartze in his textbook on the diseases of the ear, and later by Stacke and others. Ludewig showed clearly that the incus was diseased in 85 per cent. of his cases, so that we now deem it advisable to extract both ossicles in every case in which we perform ossicectomy. Politzer recently enumerated the indications very concisely in his textbook (20). They are as follows: In—

(1) Obstinate middle ear suppurations which resist all local treatment and are associated with caries of the malleus.

(2) An obstructed flow of pus from the superior

tympanic space, when this, in spite of long continued antiseptic treatment, is occasionally accompanied by painful swelling of the posterior wall of the meatus. To this class belong those cases in which the handle of the malleus is adherent to the promontory wall, and in which a fistulous opening is present in the posterior superior quadrant of the membrana tympani through which curdy septic secretion flows from the attic. These cases rarely heal without operative measures.

(3) Cholesteatomata in the superior tympanic space which cause frequent relapses of the middle ear suppuration.

(4) Obstinate, chronic suppuration of the external attic with perforation of Shrapnell's membrane. In such cases even if no caries of the malleus and incus is demonstrable, extraction should always be carried out, if the larger portion of the membrana tympani is destroyed, and only a small remnant of the membrane is still in connection with the malleus; in other words, in those cases in which the malleus and incus are of no more value to the function of hearing; extraction is furthermore indicated when a septic secretion is discharged through a perforation in Shrapnell's membrane and is associated with a high degree of deafness.

(5) When granulations are present in the attic, which in spite of their repeated removal and cauterization grow into the tympanic cavity and meatus and especially if symptoms of pus retention are simultaneously evident.

(6) After an exhausted middle ear suppuration when a high degree of deafness exists in consequence of adhesion of the handle of the malleus to the promontory wall; in flat adhesions of the membrana tympani and manubrium to the inner wall of the tympanic cavity; in extensive rigid calcification of the membrana tympani; in demonstrable ankylosis of the malleus and incus; and in incurable narrowing of the Eustachian tube (Stacke).

These then are the indications for performing ossicectomy which seem to cover the ground very fully. In the writer's opinion, however, he believes that ossicectomy may be performed in some chronic catarrhal conditions of the middle ear, especially when the hearing is greatly reduced, when the subjective noises are extremely annoying to the patient, and when all other means have failed. In these cases, we undertake the operation with the hope that we may gain a slight improvement in the lost function, and may also obtain a diminution or relief of the troublesome tinnitus. In those cases in which the foot plate of the stapes is fixed, as for instance, in otosclerosis, a favorable result cannot be hoped for. It is in the chronic cases of otorrhœa associated with perforation of the tympanic membrane that our best results are obtained, and it is mainly for this class of cases that the operation is intended, as we are able in the majority of such cases to bring about a cessation of the long existing discharge.

We see therefore that ossicectomy is not a surgical measure advocated as a means to improve the hearing, but is highly recommended as a preliminary operation in all chronic suppurative cases in which local treatment of all kind has proved of no avail.

This operation, which is performed under local anæsthesia, is absolutely free from all pain, and

owing to the admixture of adrenalin is not accompanied by any hæmorrhage. The details are as follows:

The anæsthetic used is a 1 per cent. solution of cocaine, to which we add an equal part of adrenalin solution (1-1000).

The patient is placed in the sitting posture just as in any ordinary examination of the ear. The external auditory canal is then thoroughly cleansed with soap and water, followed by irrigation with a 1 per cent to 2 per cent. carbolic solution, or 3 to 5 per cent lysol solution. It is then wiped out with a cotton plug soaked with alcohol or ether. We next introduce into the canal the cleft speculum (Fig. 1), which has the advantage of concealing everything except the superior wall into which we make our injection.



FIG. 1.—Cleft ear speculum.

The syringe employed by the writer is the one devised by Neumann (Fig. 3); it contains about 30 minims and is entirely made of metal, so it can be readily sterilized. The fluid to be injected has already been mentioned above and 20 to 30 minims are sufficient to bring about the desired anæsthesia.



FIG. 2.—Frontal section of the external auditory canal (after Politzer): A, place of union of the membranous and bony canal, point at which needle is introduced; B, tympanic cavity; C, external auditory canal; D, bony superior wall.

The success of the anæsthetic depends mainly upon its proper application. The needle of the syringe is introduced into the superior wall of the external meatus (Fig. 2 A) at the place of union of the membranous and bony canal; this can be easily found by raising and lowering the auricle, as a fold will be noticed at the junction. The introduction of the

needle is generally accompanied by a slight prick, which the patients do not, as a rule, object to, but it is well, however, to advise them of this fact beforehand. In those cases in which the patients are very sensitive we can first freeze the exposed superior wall with a spray of ethyl chloride and then introduce the needle as stated above. This is, however, not necessary as a rule. Having the needle thus in place, we next slowly inject the fluid, which may be accompanied by a slight burning. The parts become slightly infiltrated and assume a bleached appearance; we then wait for 5 or 10 minutes, at the end of which time we have procured a complete anæsthesia of the external meatus and middle ear, and are thus able to proceed with the operation of extracting the ossicles without the least pain to the patient and with complete absence of hæmorrhage.

Our next step is to remove the hammer. By means of a small straight tenotomy knife (Fig.

14) we make two incisions in the remnant of the membrana tympani; one in front of, and one behind the hammer (Fig. 4 A and B). These incisions extend from the borders of the perforation high up to the sulcus tympanicus and thus separate the hammer entirely from the remainder of the drum. In cases of attic suppuration, in which the drum is still intact, with exception of the upper part in Shrapnell's membrane, we make the anterior and posterior incisions in the drum as before, but also a third, below the hammer and at right angles to the other two. In making the first two incisions we often cut through the chorda tympani, if still present, which is sometimes experienced by the patient as a slight tingling in the side of the tongue; this, however, passes off

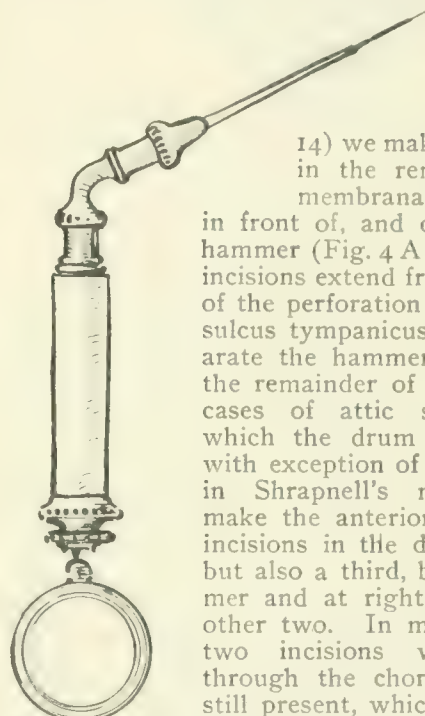


FIG. 3.—Neumann syringe for injection.

shortly.

We then take the Delstanche ring knife (Fig. 10) pass it around the detached hammer and cut upward, so as to sever the tensor tympani muscle, if still at hand, and also to break through any adhesions of connective tissue. If, however, the hammer is adherent to the promontory wall, as is often the case, we must first free it. This is best accomplished with a small curved tenotomy knife (Fig. 11) with which we are able to get behind the hammer, cut through the adhesions, and at the same time gently pull it forward. In doing this we must be very cautious, as we may readily come in contact with the stapes and cause it to become dislocated, or the hammer may not only be adherent to the promontory but also to the stapes, so that if the adhesions are not thoroughly severed the stapes may be pulled out of its position; this may be followed by very unpleasant sequelæ. Having cut through the adhesions with the Delstanche ring knife, the hammer is gently

shaken to and fro so as to loosen it from its position. It is then grasped high up by the neck with the Sexton forceps (Fig. 5) and while gently shaking we make, at the same time, downward traction, which thus brings the entire bone into the tympanic cavity, whereupon it can be readily removed. While drawing the hammer down, care must be taken not to exercise too much force, as the head may easily break

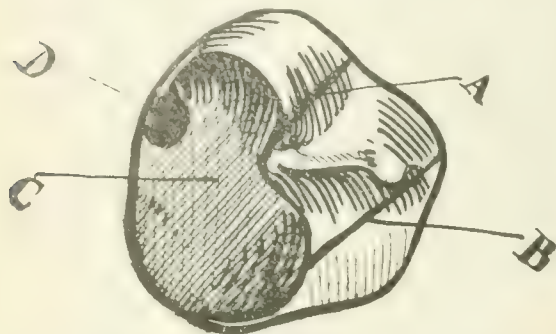


FIG. 4.—Right tympanic membrane with large perforation (after Pichard); A, posterior incision in drum; B, anterior incision in drum; C, large perforation; D, tympanic orifice of the Eustachian tube.

off. Having thus removed the hammer, we next direct our attention to the extraction of the incus.

Although we cannot always see this ossicle it is generally present in most cases, in spite of the fact that suppuration has lasted a long time. In order to remove this bone several hooks have been devised by Kretchman, Ferrer, Ludewig, Zeroni, and others. The writer generally uses the hooks of Zeroni (Figs. 6 and 7) or the incus spoons of Neumann (Figs. 8 and 9) but usually prefers the latter. When using the spoon we first introduce it into the upper tympanic space in such a manner that the concavity of the spoon is directed backwards. It must not be pushed forward against the promontory as we may easily injure the stapes, but must be constantly kept in touch with the posterior surface of the outer attic wall. The spoon is then rotated downwards and backwards, 90 degrees, whereby it is brought upon the body of the incus. By slight downward pressure the incus is loosened from its position, and gradually drops down into the lower part of the tympanic cavity from which it is afterwards readily removed with a forceps.

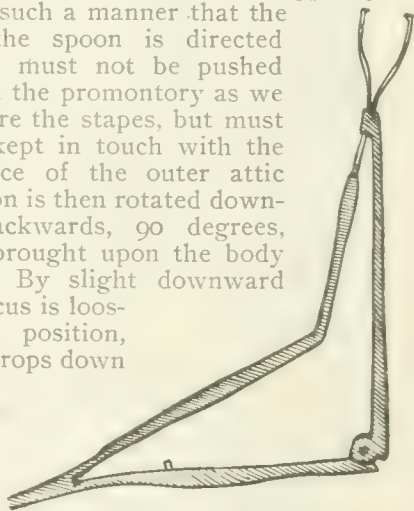


FIG. 5.—Sexton's forceps for extractions of the ossicles.

In cases in which we wish to remove the external attic wall, in other words a modified Stacke's operation, we make two parallel incisions one half inch in length, in the superior wall of the external meatus running from the annulus tympanicus towards the external orifice. Another incision is then made at right angles to these two, thus forming a small flap, which is readily removed with a periosteal elevator, thereby exposing the external attic wall. This is now easily taken away with the small chisel (Figs.

12 and 13) or with the so called forceps chisel. In chiseling, the operator must direct the instrument under constant observation and illumination, while an assistant hammers gently, and the small pieces of bone are then removed with a forceps.

Having thus removed both ossicles and outer attic wall we again irrigate with a solution of lysol, insufflate some boric acid powder, and pack with a strip of sterilized gauze. This is allowed to remain two or three days, if the patient does not complain of pain.

The after treatment consists merely in the insufflation of boric acid powder and packing with sterilized gauze, which should be done every two days. This may require two to four weeks, or even longer.

The operation as just described is generally car-

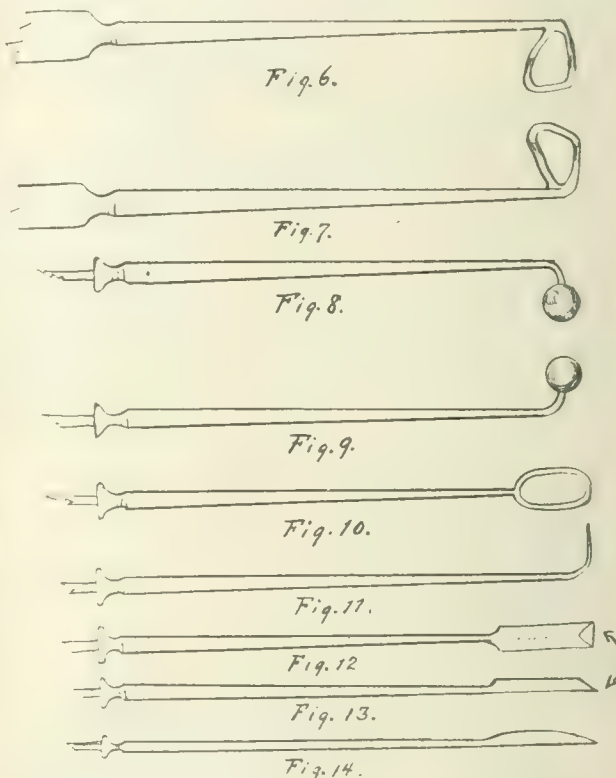


FIG. 6.—Zeroni's incus hook (left); FIG. 7.—Zeroni's incus hook (right); FIG. 8.—Neumann's incus spoon (left); FIG. 9.—Neumann's incus spoon (right); FIG. 10.—Deistanche's ring knife. FIG. 11.—Small curved tenotomy knife; FIG. 12.—Small chisel to remove external attic wall; FIG. 13.—Chisel, side view; FIG. 14.—Tenotomy knife.

ried out, as already stated, without pain or hæmorrhage under local anæsthesia, and is as a rule followed by no bad after effects. At times, the patients complain of a slight headache or a mild burning in the ear, which, however, passes over within a day or so.

Although the operation seems comparatively easy to perform, yet it requires a certain manual dexterity which is readily acquired.

The writer has had no evil results after his operations, still one must be careful as one may get: (1) A facial paralysis which may be brought about by injury to the facial nerve owing to a dehiscence in the Falloppian canal, or to fracture of its walls, or to slight injury of the walls of this canal, which is followed by a slight extravasation about the nerve. (Ludewig reported two cases in which he had facial

paralysis, both of which recovered, however, within a short time). (2) Temporary loss of taste on one side of the tongue; and (3) headache, dizziness with nausea and vomiting, and temporary loss of hearing; these are usually due to some slight injury to the labyrinth owing to a dislocation of the foot plate of the stapes, may last weeks or months, and finally subside.

As the writer has already stated, he has performed quite a number of ossiculectomies under local anæsthesia, but will record here only five of his cases, giving a larger series of cases in another paper of later date.

CASE I.—Lena B., age 17 years, school girl; had purulent discharge from left ear for 12 years after an attack of scarlatinal diphtheria. No headaches or dizziness; right ear normal; inspection of diseased ear showed almost complete destruction of the tympanic membrane with the stump of the hammer projecting into the perforation. Part of the external attic wall gone. Long process of the incus visible. Patient was treated during these 12 years at various clinics, and by the writer for four months, but without effect. Tuning fork tests showed middle ear trouble with no labyrinthine involvement. Hearing tests gave before the operation whispered speech 3 to 4 feet; loud speech, 7 to 8 feet.

Ossiculectomy was performed under local anæsthesia with absolutely no pain. The hammer was removed with ease; the long process was necrotic, the neck thickened and the head somewhat necrosed also. The long and short processes of the incus were necrotic while the body was almost normal. Hearing tests after operation were, for a whisper 7 to 8 feet; for loud speech, 10 to 12 feet, so that there was quite an improvement. The wound was irrigated and packed with sterilized gauze. Patient complained of headache and slight dizziness for a few days, which, however, passed away. Discharge from the ear was rather profuse for two or three days, for which she was given formalin and glycerin installations 1 per cent. It then got less and only boracic acid powder was insufflated. Two weeks later the discharge ceased entirely and has remained so ever since, which is nearly eight weeks.

CASE II.—Walter C., 16 years old, office boy, came to the clinic with discharge from both ears, of 15 years' standing after an attack of measles. Examination showed a rather copious purulent discharge from both ears; tympanic membranes almost completely destroyed; handle of malleus reduced to a small stump and projecting into the perforation. Incus not visible. Mucous membrane of tympanic cavity swollen and congested.

Tuning fork tests gave middle ear affection with no labyrinthine involvement. Hearing tests gave before operation: Left ear, whisper, 1 foot; loud speech, 4 feet. Right ear, whisper, 3 feet; loud speech, 5 to 6 feet.

The patient was treated at the clinic for several months with installations and syringings; the discharge became greatly less in both ears, but did not cease. An operation of ossiculectomy was performed under local anæsthesia in the left, or more, affected ear. The hammer was found to be necrotic, likewise the long and short processes of the incus. Hearing tests after operation gave whisper 3 feet, and loud speech 7 to 8 feet, showing therefore quite an improvement. The ear was irrigated, some boric acid insufflated and packed with sterilized gauze. Patient went home with no bad effects and returned to clinic the next day, stating that he had a slight bloody discharge and a little pain in the ear, but otherwise felt perfectly well. The dressing was removed, some more boracic acid insufflated and again packed. This treatment was continued about two weeks,

at the end of which time the discharge ceased. The other (right) ear which is being treated with installations of formalin and glycerin solution (2 per cent.), is still discharging slightly.

CASE III.—Rose S., 20 years old, servant. Patient had an otitis media acuta in the right ear, which was followed by an acute mastoiditis for which she was operated. This was performed seven months ago, but the discharge from the ear has kept up ever since. Four months ago she presented herself at the Mt. Sinai clinic to be treated for the otorrhœa. She was given irrigations and installations for two months, but with no effect.

Examination showed an entirely healed postauricular cicatrix. In the ear, we could see, a large destruction of the membrana tympani with the handle of the hammer adherent to the promontory. Incus not visible. The mucous membrane was covered with a purulent discharge and appeared red and swollen. Tuning fork tests showed an affection of the sound conducting apparatus with no involvement of the labyrinth. Hearing tests before operation gave 2 to 3 feet for whisper, and 7 to 8 feet for loud speech.

Ossiculectomy was performed under local anæsthesia, with no pain or hæmorrhage. The hammer had to be first separated from promontory by cutting through the connective tissue adhesions, and while doing this the writer accidentally came in contact with the stapes, so that the patient had such an attack of dizziness that she almost fell off the chair; this, however, passed away within a few seconds.

The hammer was found to be necrotic at the head and short process, while the incus was almost normal. Some rough surfaces of bone could be detected with the probe in the attic, which, however, were curetted out. The hearing after the operation showed no improvement, remaining about the same as before. The wound was irrigated, as usual, insufflated and packed.

The patient returned two days later, having had some headache and very little pain. The discharge kept up to a slight degree for some time, but ceased three weeks ago. At present the cavity is dry and a new membrane is beginning to develop.

CASE IV.—Minnie L., age 15 years, school girl. Patient had in the right ear a suppurative discharge for five years, which began as an ordinary acute suppurative otitis media. She had been treated for the last three years, but presented herself at the Mt. Sinai clinic six months ago. For two months she was given irrigations, installations, etc., which proved of no benefit.

Tuning fork tests showed a diseased condition of the middle ear with no labyrinthine involvement. Hearing tests before operation showed whisper at 5 to 6 feet; loud speech, 8 to 10 feet. Inspection of the middle ear revealed total destruction of the drum with handle of the hammer projecting into the perforation and adherent to the promontory. The incus could not be seen, but the stapes was plainly visible. The mucous membrane of the middle ear was congested and swollen and covered with a layer of pus. The stapes when touched with the probe was movable.

Ossiculectomy was performed under local anæsthesia. The hammer was first relieved from its adhesions with the promontory and then removed, extraction of the incus following. The handle of the hammer was necrotic, as well as the neck and head. The long process of the incus was absent, the body fairly normal, but covered with some granulations. Some small granulations and raw bone were also present in the attic; these were, however, easily curetted away.

The hearing test after operation showed no loss or gain. The cavity was again irrigated, insufflated with boracic acid and packed. The patient did well, and the discharge gradually ceased, the after treatment being similar to the previous cases.

CASE V.—Emil R., 19 years old, workman. Patient had purulent discharge from left ear for one year, after an acute suppurative otitis media. The otorrhœa has continued ever since. On examination some months ago a few small polypi were found, which were removed. Irrigations and installations were administered for several months, but the discharge continued. The membrana tympani showed large perforation with hammer adherent to the promontory, incus not being visible. The mucous membrane of the middle ear was congested and swollen and covered with some purulent secretion. The tuning fork tests showed a middle ear disease, but no labyrinthine affection. The hearing for whisper, before operation, was 7 feet, and for loud speech 12 feet.

The hammer and incus were removed by the painless injection method. The adhesions between the hammer and promontory were first severed, and the hammer then extracted. It was found to be thickened at the neck, with the head and handle necrotic. The incus had undergone quite a change, as only a small portion of the body was still at hand. The small granulations in the attic were easily scraped out.

The hearing after operation showed a slight increase and almost approached the normal.

The cavity was treated as in the cases previously described. The patient complained the next day of a slight hæmorrhagic discharge and a little pain during the night, which soon subsided. Since a week the cavity has become dry.

In reviewing these cases, we notice that they were performed in individuals over 15 years of age, that they were undertaken at the clinic under local anæsthesia without any pain or hæmorrhage, and that they all ran a favorable course with a cessation of the chronic discharge. The operation can, as a rule, be performed only in adults, as children are timid and restless, and will therefore not permit the carrying out of this procedure. The anæsthetic used was a 1 per cent. solution of cocaine to which an equal part of adrenalin solution (1-1000) was added, thereby giving complete anæsthesia and no bleeding. When the patients were questioned whether they felt any pain, they invariably answered that they experienced none at all, but could hear the instrument in the ear. None of the cases was followed by any unpleasant sequelæ, but pursued a regular course. The discharge ceased in all the cases, but as the time which has elapsed since the operations is, as yet, rather short, the writer is not in a position to state whether the cures obtained are temporary or permanent, but will report again on these cases in a paper at a later date.

The ossicles were found more or less necrotic in all the cases, and in some were surrounded by granulations. The middle ear mucous membrane was congested and swollen and covered with a purulent discharge. After the operation, it became paler in color, the swelling subsided, and epidermis began to form over it.

The tuning fork tests revealed in all the cases a lesion in the sound conducting apparatus without any involvement of the labyrinth. The hearing tests were made before and after the operation and showed slight improvement in three cases (I, II, and V), a stationary condition in one case (IV), and a slight diminution in one case (III). So that, on the whole, the results are rather favorable.

The operations were carried out within 20 to 30 minutes, and as already stated, were undertaken not

as a means to improve the hearing but as an endeavor to bring about a cessation of the otorrhœa. In no case was the external attic wall removed, as the writer thinks this should be done only in cases in which there is cholesteatoma and a large polypi formation in the upper tympanic space, and in cases in which there is a long standing discharge in the attic with perforation of Shrapnell's membrane, the rest of the drum being intact. These were not present in the cases recorded above and therefore a modified Stacke's operation was not found necessary. In every case both ossicles were removed.

The advantages which this operation yields are mainly these: (1) It removes the diseased ossicles which no longer functionate properly, thereby acting as a foreign body in keeping up the otorrhœa; (2) it opens up a free, large cavity which affords better drainage from above and admits of a more thorough after treatment; and (3) it gives us a clue as to the extent of the pathological process. For, if the suppuration ceases after the removal of the hammer and incus we may assume that these bones were the disturbing factors; if, on the other hand, the otorrhœa continues after the operation, one may then be rather certain that the necrosis is not limited merely to these bones but extends to the surrounding areas and may later require more radical interference. As is well known, it frequently happens that patients undergo a mastoid operation in acute cases, but the discharge from the ear still continues. In such cases it is always well to suggest the removal of the hammer and incus, if still at hand, by the injection method, for we are often able to bring about a cure by this means, as is well shown in case III, in which a mastoid operation had already been performed.

In conclusion the writer wishes to state that much credit is due Dr. Neumann for having given us such an excellent method of operation. For any surgical procedure, such as ossicectomy, which can be carried out under local anæsthesia without causing any suffering to our patients is certainly a valuable acquisition to the practice of otology.

It frequently happens with any new operative measure, that it is liable to be carried to extremes, and as Politzer correctly states, the suppuration does not always cease after extraction of the hammer and incus, nevertheless the writer advocates this painless method of ossicectomy as a preliminary operation in every case of chronic suppuration of the middle ear in which medicaments of all kinds have proved of no avail after an honest trial, as we are often able by this means to bring about a cure of the otorrhœa, thereby sparing our patients the ordeal of being compelled to undergo a radical mastoid operation which is not always followed by the best results and is frequently accompanied by a protracted and painful after treatment.

References.

1. Gruber: Die Myringectomy als Heilmittel gegen Schwerhörigkeit und Ohrensausen. *Wiener allgemeine medizinische Zeitung*, Nos. 39-43, 1863.
2. Wreden: *Monatschrift für Ohrenheilkunde*, i, 2.
3. Schwartz: *Lehrbuch der chirurgischen Krankheiten des Ohres*, 1885.
4. Kessel: Ueber das Mobilisiren des Steigbügels durch Ausschneiden des Trommelfelles, Hammers und Ambosses bei Undurchgängigkeit der Tuba. *Archiv für Ohrenheilkunde*, No. 13, 1878.

5. Lucae: Ueber operative Entfernung des Trommelfelles und der beiden grösseren Gehörknöchelchen bei Sklerose der Paukenschleimhaut. *Archiv für Ohrenheilkunde*, No. 22, 1885.
 6. Sexton: *The Ear and its Diseases*, New York, 1888.
 7. Sexton: *British Medical Journal*, 1890.
 8. Stacke: Zehn Fälle von operativer Entfernung des Hammers. *Archiv für Ohrenheilkunde*, 2nd Part, No. 26, 1888.
 9. Burnett: *Medical News*, November 2, 1889.
 10. Ludewig: Ueber Ambossaries and Ambossextraction, ein Beitrag zur Aetiologie und Therapie der chronischen Mittelohreiterung. *Archiv für Ohrenheilkunde*, 1890, Nos. 29, 30.
 11. Stacke: Indicationen betreffend die Excision von Hammer und Amboss. *Archiv für Ohrenheilkunde*, 1891, No. 31.
 12. Dench: *Archives of Otolaryngology*, xx, 1891.
 13. Richardson: *Archives of Otolaryngology*, xxi, 1892.
 14. Grunert: *Archiv für Ohrenheilkunde*, xxxiii.
 15. Gomperz: *Monatsschrift für Ohrenheilkunde*, 1892-1893.
 16. Dench: *New York Medical Journal*, 1891.
 17. Jack: *Transactions of the American Otological Society*, 1892 & 1893. *Boston Medical and Surgical Journal*, 1895.
 18. Blake: *Transactions of the American Otological Society*, v, 1893. *Transactions of the International Congress*, Rome, 1894.
 19. Neumann: Technik und Indicationen der Hammer-Amboss-Extraction. *Archiv für Ohrenheilkunde*, ii and iii, 1905.
 20. Politzer's *Textbook of the Diseases of the Ear*, English translation, 1902.
 21. Gruber's *Textbook of the Diseases of the Ear*, English translation, 1893.
- 57 EAST NINETIETH STREET.

DIAGNOSIS OF CHRONIC URETHRAL DISCHARGES.*

By S. LEON GANS, M. D.,
PHILADELPHIA,

DEMONSTRATOR OF GENITOURINARY DISEASES IN THE
MEDICO-CHIRURGICAL COLLEGE, ETC.

My apology for responding to the courteous invitation of your chairman with the so often treated subject of the diagnosis of chronic urethral discharges is due to the fact that I am convinced, from what I see and hear, that there are yet a few cases in existence, some due to lack of attention on part of the patient, others to injudicious treatment.

While the cure of these cases is, I grant, most tedious, it is in no manner a mystery. The fundamental principle applies here, as in other pathological conditions. Find the cause and remove it. Fortunately we are not compelled to search far.

One of two fields, or both, will in every instance reward us. The lesion will either be found within the urethra or just without, in its accessory sinuses. The canal itself is divided into an anterior and posterior by that most important and forgotten sphincter muscle—the compressor urethræ, which prevents urine and pus flowing from the bladder to the meatus and fluids going from the meatus to the bladder.

The accessory sinuses are quite as important here as elsewhere and none of us would be willing to treat a turbinated bone, with pus flowing over it, without a search for the real trouble in the accessory sinuses.

The urethral accessory sinuses to be searched are periurethral glands, especially lacuna magna, Cow-

per's glands, prostate gland, with its numerous pockets, and seminal vesicles.

Accepting the usual classification of chronic urethral discharges as convenient for study, we have: Urorrhœa, gleet and chronic gonorrhœa, to which might be profitably added prostaticorrhœa.

Urorrhœa is a sticky secretion which will follow the finger as it is drawn from the meatus like sap. This condition follows a prolonged urethral inflammation and is due to leaky blood vessels and over-active mucous glands.

The fluid is made up of mucus and epithelial cells, and the condition will respond to methods to tone up the general health if local treatment is withheld.

Gleet is the secretion of a granular patch usually posterior to a stricture. While this patch is within the canal, the round cell infiltration going to make up the stricture is just without, being in the periurethral tissue, and it must be borne in mind that the spongy body stops at the bulb; therefore we have no periurethral connective tissue back of this point and no gonorrhœal strictures posterior to the bulbomembraneous junction.

This coarctation prevents a perfect apposition of the walls of the urethra posterior to it, with the result that at each urination there is a fraction of a drop of urine left in the canal just behind this point, which causes a maceration of the superficial epithelium with a resulting discharge of varying amount, made up of mucus, pus and epithelial cells.

As gonorrhœal strictures always occur in front of the external sphincter of the bladder, we look for the discharge, however slight, to appear at the meatus, this being the direction of least resistance.

We must always keep before us the fact that stricture, with its train of symptoms, may coexist with one or more other urethral conditions. Gleet is by no means a constant symptom. There usually exists loss of the parabolic curve and dribbling after urination; these symptoms also presenting themselves in other conditions which act as an obstruction to the stream, as large prostate gland. The importance of the twisted stream is exaggerated, as the shape of the stream depends more upon the nozzle than the hose, the meatus, therefore, influencing this condition.

Frequency of urination will usually be in proportion to the proximity of the lesion to the bulb and the calibre of the stricture.

An uncomplicated stricture will show the first glass clear, with scaly shreds, and the second clear and no shreds, the clear urine and shreds denoting a localized lesion. Having been led by this investigation to suspect stricture, we are ready to confirm our diagnosis. Measure the circumference of the penis. One of three inches should admit a 26-28 millimetre instrument, each increase of 0.25 inch in circumference calling for an increase of two millimetres in the instrument to correspond to the normal calibre of that particular urethra. Now select a bougie à boule with a flexible shaft two millimetres below the normal size and have the patient empty his bladder. Then, with perfect asepsis, both as to the surgeon's hands and the field of operation, we introduce the acorn gradually, gently, but firmly, through the bulb. Any hitch going in or coming out should be noted, and the difference will

* Read before the October meeting of the Northwestern Medical Society.

represent the anteroposterior dimension of the stricture. Of course the size bougie selected may have been larger than the stricture would admit, and in that case we would be compelled to gradually decrease in size down to a filiform if necessary. If the meatus is of insufficient size a meatotomy must be done or a urethrometer used.

The size of the bougie admitted will indicate the opening in the stricture. Too much stress cannot be laid upon the care of urethral manipulations, as we read from time to time of death following the use of a bougie, with a few that we do not read about. It is my custom to put the patient on an internal urinary antiseptic at least twenty-four hours before an examination, wash out the canal before and after instrumentation; avoid all manipulations unless the bowels have been moved, also in the presence of any febrile condition. Above everything else avoid force.

A chance for mistake in diagnosing a stricture is a spasm of the muscular fibres around the canal or of the compressor urethræ muscle. This latter condition accounts for those cases in which we fail to introduce a filiform, diagnosticate organic stricture, etherize the patient, put him on an operating table prior to section, and, much to our surprise, introduce a large graduated bougie. Had we been patient at the first attempt and allowed the instrument to have rested against the face of the obstruction, we would have found that the resistance gave way gradually, allowing the explorer to glide in and not jump over, as in organic stricture, giving the sensation of a fish biting at bait. As we recall the anatomical arrangement of the canal, we will be led to search the bulb and the first two inches of the canal for original strictures of gonorrhœal origin, while those of a traumatic origin may exist in the membranous urethra.

Prostatorrhœa will give a train of symptoms peculiar to that condition. A large number of symptoms of the sexual neuresthenia variety, often a white of egg or glycerin like discharge from the meatus after urination or defecation, due, of course, to the physiological milking of the gland at the end of these acts. In those cases where the patient is decidedly weak and possesses flabby tissue we may have a constant dribbling, due to a relaxed condition of the compressor urethræ. The fluid may vary in amount from a few drops to an amount sufficient to saturate the linen and in color from a white to a chocolate.

A rectal examination will show a tender and somewhat congested prostate, which may be unilateral or bilateral; while a bougie introduced will often elicit a hypersensitive condition of the posterior urethra, showing an associated catarrhal or congestive posterior urethritis.

Many of these cases will have a phosphaturia. The discharge will be prostatic fluid, bearing in mind that these cases are not dependent on nor a sequence of infection, but may be due to sexual excesses, masturbation, excessive horseback or bicycle riding, prolonged sexual excitement without coitus, or any act which will cause a prolonged congestion of the prostate gland.

Prostatitis is a complication of an infection, and the fluid shows signs of inflammation, containing pus cells.

Now, as to that old nightmare, chronic gonorrhœa, a careful history will suggest a differential diagnosis between gleet, or goutte militaire, and this condition. The former will, as a rule, be little influenced by drink and coitus, while these will light up old lesions of chronic gonorrhœa. Then again, a stricture will give the history of a long period of the normal condition between the last urethritis and the present symptoms, as it takes a true gonorrhœal stricture from one to four years to become sufficiently organized to cause symptoms. It must be borne in mind that gleet may immediately follow a subsequent attack of gonorrhœa, while the stricture resulted from a previous attack.

Before going over a routine method of examination we might refresh our memories on a most valuable adjunct to diagnosis in all forms of genito-urinary conditions involving the urethra, viz., Thompson's two glass test, with some modifications. This test, if carefully applied will locate the pathological lesion as to its anatomical situation. It depends upon the valve like action of the constrictor urethræ muscle and will show us an anterior, posterior, or total urethritis.

Turbid urine will signify a more or less extensive involvement of one or both areas, while clear urine with shreds will point to localized patches or follicular involvement. The test is a mechanical one and based upon the fact that all fluids flow toward the point of least resistance. Therefore pus in front of the cut-off muscle will appear at the meatus, while excretions in back or within its grasp will flow into the bladder and mix with the urine contained in that reservoir. This holds good in all cases in which sufficient pus is formed to appear at one of these two places or both, while in some cases only enough pus will be formed to lie immediately in contact with that part of the mucosa upon which it is formed, and therefore fails to appear at either end of the urethra.

The shape of the shreds and the manner in which they act is often of assistance in making a diagnosis. and Taylor's classification will often be of service.

Usually four main forms are described, two or more presenting in the same case depending upon the multiplicity of the lesions:

1. Heavy, thick shreds which sink rapidly indicate active pus formation.

2. Light, feathery shreds which float about gracefully and sink in a jelly like mass when removed point to a preponderance of mucus.

3. Short, thick, comma like shreds denote chronicity and bear the same relation to the glands of Littre and prostatic follicles as a hyaline cast does to the kidney. When they appear in the first glass we look to the former field, and when in the second glass to the latter, provided the patient had not stopped urinating between the two glasses, as in that event we would have the physiological squeeze of the prostatic muscles, with the result that the contents of the prostatic follicles would be, in part at least, emptied into the first glass.

4. The wide, scaly or flat shred which gradually finds its way to the bottom is an exfoliation of a superficial ulcer or granulation patch, sometimes posterior to a stricture. It is made up of squamous epithelium, mucus, and pus cells.

The technique is as follows: Take two glasses

that are perfectly clean and have the patient urinate first in one and then in the other without any cessation of the act, first having cleansed the glans penis and subpreputial sac. If we have a marked total urethritis we will have both glasses showing evidence, as the pus in the posterior urethra which flowed back since the previous urination became mixed with the urine in the bladder. The contaminated urine flows into the first glass carrying all débris contained in the entire urethra with it, and the mixed urine then shows evidence in the second glass. This is a satisfactory test in cases of some severity.

Now let us look at a case of anterior urethritis.

The pus in this case would remain anterior to the cut-off muscle and the clear urine would wash out the urethra into the first glass, the second being clear.

A third condition in which only a slight posterior inflammation existed, with not enough pus to flow into the bladder, would answer this test with the same picture as the preceding case, as the pus in the entire canal would appear in the first glass.

In order, therefore, to overcome this fallacy, we introduce a small rubber catheter to the face of the cut-off muscle, being careful not to come within its grasp, and allow a nonirritating fluid to flow through the anterior canal. If an anterior urethritis exists all the shreds will appear in the wash water with both glasses clear, while if a posterior urethritis is present the return water will be clear, but the first glass will contain all the shreds and the second clear urine. It will be seen from these facts that to get an accurate test two precautions must be observed: Have the urination a continuous one while collecting specimens in two glasses, and in all cases, with the exception of those of marked severity, which, of course, are in the minority in chronic conditions, flush out the anterior urethra before applying the test.

A third glass test may be added where an involvement of the prostate gland is suspected. Collect the first two in the usual way, then milk the prostate gland by pressure from within the rectum. The third glass will often contain the greatest amount of débris after this procedure, being the contents expressed from the gland.

Having noted thus far carefully, we are prepared to make a systematic search of the entire canal, first within and then without, having already received a valuable hint to search the follicles if hooks were present. A pin hole meatus may conceal trouble in the lacuna magna. Cloudy urine is a positive contraindication to the use of a urethral instrument, and means that we must first use local astringents to improve the mucosa and, if not able to cure, to at least convert a general inflammation into a localized one. Having obtained clear urine with shreds (and we must always exclude turbidity due to phosphates or urates), we then employ a bougie à boule to measure the distance from the meatus to any superficial ulcer that may exist. This spot when reached will cause the patient pain of varying degree and blood or pus at the shoulder of the acorn.

We now go through the cut-off muscle and find a hypersensitiveness in the membranous and pro-

static urethra, in those cases in which we had pus or shreds in the second glass or in the first glass after flushing out the anterior canal. This condition of posterior urethritis will exist in a large proportion of chronic gonorrhœas and indeed in the vast majority of cases is the cause. There is no periurethral thickening, as there is no spongy body at this point; but there exists a thickening of the mucosa, the columnar epithelium having been converted into squamous, with the verumontanum thickened and increased in size, being in a catarrhal state.

Now, as to the extraurethral lesions. Fürbinger's hooks always suggest follicular involvement and the lacuna magna may, where there is a large meatus, be seen on the roof just within the fossa vavicularis with pus exuding from it. With a less roomy urethral opening the help of a speculum may be called for. Follicles in the floor are often found by palpating along the under surface of the organ, the sensation being given of fine shot deep within the tissue. An infected Cowper's gland, unless acutely inflamed, may at times be exceedingly difficult to find, although deep pressure in the perinæum may bring out one or two spots of tenderness, one on each side of the median line. A positive diagnosis can only be established when a good view of the bulb is had through an endoscope to watch the pus well out of the mouths of the ducts as the glands themselves are pressed upon. While the bulb is a favorite seat for lesions, causing chronic gonorrhœa on account of its anatomical arrangement of tissue and vessels in addition to being the base of a U shaped tube, I am convinced by clinical observation that many cases of bulbous involvement are due to reinfection from time to time by Cowper's glands, situated between the two layers of the triangular ligament with the ducts piercing its anterior layer and emptying into the bulb. When sufficiently enlarged the glands may be palpated just within the rectum.

By having a patient stoop over a chair, with the knees fixed, or having him lie on a table on his side, with the upper leg flexed on the thigh and the thigh on the abdomen, we may, with a half filled bladder make a thorough examination of the prostate gland and seminal vesicles. The former position is the better one, as gravity is in our favor. The prostate gland may be involved unilaterally or bilaterally, may be large and congested, painful to the touch, or show that the follicles are involved in a scattered fashion, or, as is sometimes the case, in a single group of varying size.

Having introduced the index finger (with the remaining ones in extension so that we may take advantage of the natal fold), palmar surface toward patient's abdomen, we now brace the elbow against our knee and with firm, steady force to overcome the powerful glutei muscles of the patient, we are able to sweep the finger up and to the right and left of the prostate gland and outline the seminal vesicles, either or both of which may be not only tender, but decidedly enlarged. These manipulations should be carried out with great care, at no time any undue force being used, as it is comparatively easy to start up a traumatic epididymitis in this manner. In every case of gonorrhœal epididymitis there exists an associated seminal vesiculitis, as can readily be seen by the anatomical arrange-

ment, as one side of the common ejaculatory duct becomes continuous with the duct to the seminal vesicle. A certain number of these vesicular cases recover themselves by the physiological stripping of these glands, which takes place at the end of each act of urination. Those which do not resolve themselves cause a reinfection from time to time of the posterior urethra.

Having noted carefully the history, the microscopical examination of the pus, the macroscopical and, if necessary, the microscopical examination of the urine in the two glasses, explored within the anterior and posterior urethra, and then having given the accessory sinuses careful attention, we are in a position to outline an intelligent line of treatment.

I have avoided a discussion of the endoscope as an instrument of diagnosis, as I consider it a useful thing only in a comparatively few selected cases and in hands thoroughly trained in its use. Under these conditions it is a most valuable adjunct, but under other circumstances a dangerous plaything.

1618 NORTH FIFTEENTH STREET.

RHEUMATIC MANIFESTATIONS IN CHILDHOOD.

By EDWARD J. McDONOUGH, M. D.,

NEW YORK,

MEMBER OF PROFESSOR WINTER'S CLINIC FOR DISEASES OF CHILDREN, ETC.

Not so long ago it was thought impossible for a child to have rheumatism in any of its various types. Since that time, however, such men as Prout, Poynton, and Payne have advanced theories in regard to the origin of rheumatism which demonstrate satisfactorily that rheumatic manifestations can be found during childhood. Poynton and Payne seem to have brought forward the best explanation of the ætiology of the disease; they assert that it is due to a diplococcus. This view is undoubtedly the most logical, as the former theories, namely, that it was due to an excess of lactic or uric acid in the blood, could not be established on a scientific basis.

As to the manifestations of rheumatism exhibited during childhood, I would first call attention to what are popularly known as growing pains. I have found that these pains, which are so common, yield to rheumatic treatment. On further investigation I observed that there were present other symptoms peculiar to rheumatism of adult life; these were so constant that the attack was undoubtedly due to some definite disease. There was a rise of temperature, slight it is true; muscular spasm and tenderness in the joints or in the muscles alone. These children I also noted were very susceptible to amygdalitis, a condition which is generally regarded of rheumatic origin. Only recently a child was brought to me by the mother, who said that it was suffering from pain in the legs. I carefully examined the little patient, and found a distinct mitral regurgitant murmur. The child suffered from frequent attacks of tonsillitis and also had nose bleed. I could locate no local cause for the epistaxis, and therefore concluded that this was due to the cardiac trouble, which was evidently of rheumatic nature.

Chorea is another disease which I believe to be a

manifestation of rheumatism, and if the history of a case is carefully gone into, it will be found that the patient has had at some time or other signs of this disease, such as tonsillitis or growing pains. In almost all of these cases a rheumatic family history exists.

Endocarditis is a frequent complication of rheumatism in children, and should be carefully looked for in cases in which there are even only slight indications of the disease. Usually, however, the parents, not appreciating the serious results, do not consult a physician for a simple growing pain, and it is not until there has developed a serious valvular lesion that the case comes under our observation.

Pleuritic pains are quite common in children, and as they often yield to antirheumatic treatment, there is reason to suspect a rheumatic element in many of these cases. I have observed a number of cases of amygdalitis accompanied by wry neck (*torticollis*), and, according to my own experience and that of others, this condition almost invariably yields to the salicylates.

According to Barlow and Warner, fibrous nodules are found quite frequently in children, being located especially under the skin at the bend of the elbow, over the malleoli, at the margin of the patella, on the extensor tendons of the hands, fingers, or toes, or over the spinous processes of the vertebræ or scapula. These nodules appear usually in connection with other rheumatic manifestations. Personally I recall only three cases in which I have seen such nodules, each time in a case where there were other marked rheumatic symptoms.

Anæmia is very common in rheumatic children. This is another argument in favor of the germ theory, because the anæmic condition is probably due to the action of some germ on the red blood cells, as in the case of the malarial plasmodium.

The foregoing manifestations include all that I have come across in my practice. There are others which writers speak about but which as yet I have not observed. These, I understand, are not very common. Chief among them is an erythema, which, according to Cheadle, is of rheumatic origin, though very rare among children.

Concerning the diagnosis of rheumatism, if one bears in mind that in childhood the disease need not necessarily exhibit all the symptoms met with in adults, it will be found that the diagnosis is not so difficult, especially if a careful investigation is made. By this I mean ascertaining the family history, previous history of any rheumatic manifestations, such as growing pains, *torticollis*, chorea, amygdalitis, epistaxis, etc., thorough physical examination, including the taking of temperature, examination of the heart, and search for nodules.

The prognosis as regards the rheumatism itself is good, the attacks being of variable duration and severity in different cases. However, there are complications with which we must contend, and when these occur the prognosis is not good. Chief among these is endocarditis, which becomes more and more severe following each attack of rheumatism, and ending finally in valvular disease.

In the treatment of rheumatism in childhood we find a number of methods in use. To be brief, if a child has already had an attack, in order to ward off another for as long a time as possible, I adopt the

following plan: 1. Flannels the year round, changing them from heavy to light during the warmer months and vice versa. This acts as a protection from cold and chill, two of the frequent causes of an attack. 2. These patients are, as a rule, anæmic, and for this condition I put them on iron with or without codliver oil. 3. For about a month after the attack has ceased I give small doses of salophen, which acts by prolonging, to a certain extent, the effect of the drug used to alleviate the acute attack. 4. I do not restrict the diet in any way, with the exception of sugars and starchy foods. 5. Whenever a child complains of any of the foregoing manifestations, be they ever so light, I immediately put him under treatment, especially if there be a rheumatic diathesis. 6. I always recommend the removal of any growth in the throat, inasmuch as I think that this is one of the common avenues through which the rheumatic germ enters.

As to the actual treatment of an attack, I put the child at once on sodium salicylate in suitable doses, usually the maximum amount for the age. These large doses I believe to be better than the smaller ones often repeated, because the drug then gets a firm grip, so to speak, on the virus and thus shortens the attack. Of course, I watch carefully for any poisonous effects. If a joint is involved I either wrap it in cotton batting or put it in a splint, depending on the severity of the attack and on the restlessness of the patient. In cases in which I find that the salicylate does not agree with the patient, as so often happens in children, almost the first dose causing gastric disturbances, I have used aspirin. Recently I have been using it almost invariably.

The main point to be remembered in the rheumatism of childhood is to prevent as much as possible a recurrence, for with each attack the danger of cardiac complications is increased. Recapitulating the main points in the prophylactic treatment, these are: Care against exposure to either cold or dampness, regulation of exercise, flannels the year round, liberal diet, and regular amount of rest. By employing these measures it will be found that the attack can be deferred for long periods. I know of a case in which the attacks occurred about three times a year previous to my taking charge of it, and with the treatment above described there was no recurrence for four years. Of course, during this time the child once in a while complained of feeling tired, but on giving it one large dose of sodium salicylate and putting it to bed, the attack was warded off.

304 EAST SEVENTY-NINTH STREET.

OXALURIA.*

By H. H. ROBERTS, M. D.,

LEXINGTON, KY.

In presenting to you a paper upon the subject of oxaluria, I shall endeavor to go more into the clinical aspect of the subject and give to you, in part, some of the experimental experiences as well as conclusions at which I have arrived, after several years' study of this condition. I find that oxaluria and the results of such a condition are far more common than is usually supposed. That it is a true pathological condition cannot be questioned. As to its

ætiology, I doubt not but that some of you may not agree with me. I can therefore only give to you the facts as I have found them. The appearance in the urine of an excessive quantity of crystals of calcium oxalate is not sufficient evidence of oxaluria, for we know that this is not constant nor necessary for the presence of a condition of oxalic acid in the system.

We may be dealing with an excessive quantity of oxalic acid in the tissues of the body and find very little sediment of the crystals in the urine. The clinical picture presented in this class of cases is alone conclusive. Only in the very acute or chronic conditions do we find the characteristic crystals of the biscuit and hour glass forms, the clear envelope form being the most frequent. We may have an abundant amount of oxalate sediment after the ingestion of certain fruits and vegetables, of which may be mentioned asparagus, spinach, rhubarb, tomatoes, apples, grapes, lemons, turnips, onions, strawberries, also tea, etc.

This form of oxaluria may well be designated as alimentary oxaluria, and this condition may give a clinical picture different from the systematic form, being responsible for local intestinal derangements of which I will speak later.

Fürbringer believes that calcium oxalate is held in solution in the urine by the acid sodium phosphate, and when, for any reason, the acid becomes converted into a neutral salt, calcium oxalate is precipitated. I have found that this is true so far as we always find the crystals in either a faintly acid, faintly alkaline or neutral urine, and that the crystals are not only characterized by their shape, but that they are insoluble in acetic acid and readily soluble in hydrochloric acid. However, the above conditions may suffice as a reason why there should be an excessive amount of crystals precipitated, but the clinical symptoms are of greater importance from a diagnostic standpoint without such precipitations.

I do not believe a condition of either alimentary oxaluria or of systemic oxaluria does or can exist without there is some anomaly of metabolism. I find that most of the cases suffer with some form of indigestion, as stomach or intestinal disturbances. Hyperchlorhydria is frequently present, also nervous indigestion, flatulence, eructations of sour and bitter fluids. These patients are intensely irritable, they frequently have cold and clammy hands and feet, any unusual amount of muscular exercise produces undue muscular soreness, they suffer with neuralgia, they have muscular stiffness if they remain in any one position too long, lumbago is often a result, they have irritable hearts, they suffer with repeated attacks of insomnia, frequent and severe migraine, and frequent and sudden attacks of coryza. In fact, the condition of the nose and throat is almost pathognomonic; and these cases always complain of taking cold easily and will tell you that they have a bad case of catarrh and that they suspect that this catarrhal condition is the cause of their ill health.

Tinnitus aurium is a troublesome symptom and readily disappears under constitutional treatment. These cases of oxaluria have so many prevailing symptoms, of which the above are but a few, that they are frequently diagnosticated as neurasthenia or hyperchondriasis, etc. In the acute and subacute forms, pain and soreness in various parts of the body

* Read at the Kentucky Valley Medical Society.

are complained of, the patient saying he has taken cold or has rheumatism. The depression of spirits, lassitude, and extreme irritability, together with the migraine and neuralgic pains and muscular soreness, are almost constant symptoms.

Possibly there is no other condition more frequently confounded with oxaluria than the so called uric acid diathesis, gout, lithæmia and the so called rheumatism. The condition bringing about this phenomenon I believe to be one of faulty metabolism from lack of proper intracellular oxidation, and I class this condition as systemic oxaluria or idiopathic oxaluria. We know that uric acid is the only one of the purin bodies which has slightly acid properties, the others being purin bases. We know that two factors influence the excretion of uric acid and the purin bases, viz.: (1) The condition of the renal functions, and (2) intracellular oxidation. If a given quantity of uric acid be given by the mouth a very small quantity appears in the urine, also of the amount of uric acid which can be formed in nuclein or foods containing many nucleated cells, only a small quantity is excreted by the kidneys because, having entered the blood stream, it is destroyed by oxidation. Therefore, the condition of uric acid and its congeners is not one of food and absorption, but some fault within the tissues of the body.

We know that uric acid is a normal and purely a physiological process in the body as the result of perfect oxidation. And it is not uric acid which brings about deleterious conditions in the body, but the interference with normal oxidation, as a result of which we have the poisonous and toxic purin bases from nuclein. If we take nuclein or nuclein containing organs, as the spleen for example, and keep it at 98.6° with an excess of oxygen, uric acid is formed; however, if we remove the oxygen, purin bases are formed instead of uric acid. Therefore, we can readily see that uric acid does not exert any pathological effect upon the body but through its congeners, purin bases, etc.

Beyond a question of doubt all the organs of the body have the power of destroying oxalic acid, and when this oxidative power is perfect no harm results in the economy of the body. But when we have faulty metabolism from the lack of proper oxidation or combustion, then we have uric acid forming oxalic acid, not as a normal process, but as a product of uric acid from the incomplete oxidation of uric acid and faulty nuclein catabolism. It is only when there is a faulty metabolism that we have oxalic acid in excess. With perfect oxidation we have uric acid as a normal process of perfect combustion, but any condition impairing the oxidative powers or a reduction of oxygen and we have oxalic acid.

Therefore, I am firmly convinced that oxalic acid should be classed as one of the congeners of uric acid, being the product of the same through the interference with normal oxidation of uric acid. The pathological increase of oxalic acid excretion should not be considered by the appearance of an abundant oxalate sediment in the urine, for this condition of the urine may cause much deception. It may contain much oxalic acid and show very little precipitation or even none at all, for we know that the precipitation of oxalic acid or any of the purin bases from the urine is exclusively a question of reaction

and the amount of the acid and basic salts dissolved in the urine. We can, therefore, only arrive at definite conclusions by the clinical symptoms and a thorough analysis of the urine. And for this I have found nothing that gives more satisfaction than the Neubauer method, which consists of taking the twenty-four hours specimen as a basis of analysis.

Any condition which interferes with proper oxidation will increase the excretion of oxalic acid; increased oxidation causes a rapid decrease of oxalic acid. I have observed in intense oxaluria that when the patient was placed upon a liquid diet, as milk or cream and vichy water, there was a rapid diminution of oxalic acid. This I am sure is not only due to the lessening of the amount of the proteids in the tissues but more from the lack of greater oxidizing requirements.

Intestinal oxaluria I believe to be one of the causes if not the chief cause for appendicitis. The cæcum portion of the intestines contains fibrous tissues upon which oxalic acid may be precipitated if their alkalinity is diminished, the cæcum in the region of the appendix being a stagnant reservoir is a suitable medium for the accumulation of the oxalic sediment, and most of these cases are further complicated by constipation. We can then readily see how an excess of oxalic sediment and the irritation produced thereby may recur time and again until we have a marked inflammatory process present, which in turn gives a suitable field for infection of the pus forming bacteria, and the clinical picture which results therefrom. In the examination of a number of cases of appendicitis all were affected more or less with intestinal oxaluria, and in these cases where the intestinal oxalic sediment was removed there was a rapid improvement in the irritated region of the appendix, and some of these cases have been completely relieved, not only escaping an operation, but have not had the return of the appendix inflammation.

I believe without a question of a doubt that this is one of the true causes of appendicitis and many of the so called colitis and other intestinal irritations are nothing more or less than the result of oxalic acid. And in these cases which have been treated by high enema, olive oil injections, etc., the patient has readily improved and been perfectly relieved when this condition was removed.

I have found nothing so effective in the intestinal form of oxalic sediment as a carefully selected diet for the individual cases. Those foods which in themselves are not oxalic acid producers and those foods which increase combustion and easily undergo oxidation should be selected. Keep the stomach and the intestines in the most perfect condition, and give those foods which will digest in the most healthy part of the digestive tract. The salicylates and alkalis and those drugs which have the greatest quantity of oxygen are the most serviceable.

For the systemic condition the diet already mentioned is applicable. Increase elimination and oxidation by special hydrotherapy, electrical currents, fresh air, and plenty of open air exercise and the use of the drugs already mentioned will be found useful. With these therapeutical measures used with care and discretion for the individual cases, many of the so called chronic and incurable cases can be greatly relieved and may be permanently cured.

TAPEWORM SIMULATING APPENDICITIS RECURRENTS.

By A. A. GUMBINER, M. D.,
NEW YORK.

ASSISTANT SURGEON TO HARLEM HOSPITAL.

The frequency with which the diagnosis of appendicitis is made and the equal frequency of chagrin experienced consequent upon such diagnosis leads me to present this case as illustrative of this condition and as a warning to others. It also brings forth the necessity of getting a thorough history in each case and of examining the stools in persons complaining of vague or definite gastrointestinal symptoms.

Mrs. M. R., aged 32, well developed, of good family history, has been suffering with pains in right lower abdomen off and on for three years. Occasionally there would be vomiting, loss of appetite, eructation, pyrosis, etc.

Physicians she consulted treated her for indigestion and nervous dyspepsia without avail. She began to lose in weight and felt generally miserable. Her appetite was capricious. At times she would get attacks of localized pain in right side and about McBurney's point.

Three months ago I was called in to see her during one of these attacks. I found her in bed, with pain in right iliac fossa, tenderness over McBurney's point, vomiting and no rise of temperature; the pulse was slightly accelerated.

I made a diagnosis of recurrent appendicitis, on the strength of the physical signs and the history. That same night she was out of bed and feeling almost well after the usual treatment which I prescribed.

Subsequently she consulted four other physicians, three of whom concurred in the diagnosis of recurrent appendicitis, and one, an eminent authority in stomach diseases, of this city, claimed it was gallstones. The woman became so discouraged that she was willing to undergo an operation for relief from the attacks, but she was dissuaded from her intentions.

A few weeks after she accidentally, while at stool, noticed the characteristic tapeworm shreds in the fæces. Immediately she hastened to an advertising tapeworm curist who rid her of the parasite, with the result that since then she has had no further attacks, has gained in weight and has improved both mentally and physically. Two weeks ago she was delivered of a fine boy.

135 EAST ONE HUNDRED AND SIXTEENTH STREET.

Rabelais as Specialist for the Treatment of Syphilis.—

It may perhaps be considered as in accordance with the eternal fitness of things that Rabelais's fame as a practitioner seems to rest mainly on his treatment of syphilis. The method then in fashion was that of the Italian, Gaspar di Torella. At first a mercurial ointment of the strength of 1 in 40 was applied; the effects were so satisfactory that the strength was increased and the inunction was extended to the whole body. Afterwards the patients were put fasting into a room heated to such a degree that some of them fainted on entering. The treatment was continued from twenty to twenty-five days. Poor people were placed in ovens where they were sometimes forgotten. Most of those who underwent this barbarous treatment died either of exhaustion caused by profuse sweating, or poisoned by the mercury. Only about 1 per cent. survived. In addition to the depressing effects of the disease and the treatment, the unhappy patients suffered much from boredom. Rabelais used mercury with a mental treatment to ease the minds.—*The British Medical Journal*.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at frequent intervals. So far as they have been decided upon, the further questions are as follows:

XLVI.—How do you treat a sprained ankle? (Answers due not later than January 15, 1906.)

XLVII.—How do you treat whooping cough? (Answers due not later than February 15, 1906.)

XLVIII.—How do you treat pruritis ani? (Answers due not later than March 15, 1906.)

Whoever answers one of these questions in the manner most satisfactory to the editors and their advisors will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but not REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLV has been awarded to Dr. William Warren Potter, of Buffalo, whose article appeared on page 139.

PRIZE QUESTION NO. XLV.

INTERSTATE RECIPROCITY IN LICENSING.

(Concluded from page 300.)

Dr. H. J. Clements, of Converse, Indiana, remarks:

What are the difficulties in the way of interstate reciprocity? Let us get them clearly before us.

It seems to me that they are comprised under the following six headings:

1. Nonuniformity of State laws regulating the practice of medicine. As long as some States require examinations on ten subjects while others give questions on twenty subjects, it is evident that there should be no reciprocity.

2. Disparity in the preliminary requirements for the study of medicine and in the amount and character of work then necessary for the medical degree. As long as New York requires four years more studies preliminary to the entrance in a medical college than does Arkansas and requires twice the amount of actual work in college, there can of course be no just reciprocity between them.

3. Natural distrust of one board of the educational capability of another board for the work in hand. Should it be evident that no member of a certain board knew anything of practical bacteriology and pathology, it is obvious that another board should not accept their work in grading papers on these subjects.

4. Difference in the test value of the questions put by the various boards. It is apparent to all that a most ordinary applicant should do well with certain lists, while he would be entirely at sea with the more technical questions of other boards.

5. The fear that an applicant may in spite of all hunt for the easy boards and then getting his

license make a change of location at once; or failing in one State, at once take the examination in another State, to immediately return on passing and demand recognition of his license.

6. The fear of making it easy for the advertising "specialist," the abortionist, or the immoral man to move from State to State, after exhausting his various fields, or after his practice fails because of the disrepute into which he has fallen.

It is possible that there are some other obstacles in the minds of some, but it is probable that could the foregoing difficulties be met they would easily be waived, therefore, it behooves us to find some solution for the foregoing problems.

As a prime requisite, there must be a strong and thorough organization of the profession in general, and likewise associated with this a federation of all the examining boards of the various States. These boards, or at least the individuals composing them, should be a part of the general organization. They must be men of intelligence, integrity and recognized ability in their profession. They must be beyond the control of petty politics. They should be selected by the State authorities from a list nominated by the State organization or society. This is the plan now followed in some States, and doubtless will be adopted by the various legislatures when the matter is persistently and intelligently presented to them.

Taking up the foregoing problems:

1. Uniformity of legislation must be secured. The profession and especially the boards in their federation must decide as to what subjects should be made the basis of the examinations, and likewise the value of each subject. This done, it will then be possible for the various State organizations to present the matter in the proper light before each legislature, securing also such changes in the laws so as to permit reciprocity.

2. This, the most difficult proposition, may be met by the federation of examining boards deciding upon a standard requirement of preliminary education and then one for the work of the colleges. They must then carefully judge the work of the various colleges and prepare a list of those whose standard falls below that required or vice versa. This would kill the poor schools and make it largely impossible for the unprepared to come before the boards. The plan after all is simply an extension and enforcement of that which the Association of American Medical Colleges and the American Medical Association has been so efficiently employing for the purpose of raising the standard of medical education.

3. If the members of the State boards are selected by the legislatures from the lists presented by the State society, their personnel will be raised and the profession of one State will learn to respect the ability of the best men of another State. It would also be still better, should the State associations select their nominees for their ability in certain subjects. The boards would then be selected somewhat as one selects a faculty, each member selected for some special work.

If it is known when a member is appointed that his work will be the grading of the papers in

bacteriology and pathology, one essentially ignorant of these subjects would not be selected.

4. Representatives of the various State boards or a committee appointed by their federation should prepare all questions used in all the States. Then, all examinations occurring on the same date, it will be evident that all applicants are being measured by the same standard.

5. The provision granting reciprocity should require at least two years' practice in the State in which he took the examination before eligibility for reciprocity with another State. Should the applicant desire to move sooner, let him take the next examination. Reciprocity is not wanted to protect the medical tramp.

6. On the removal from one State to another under reciprocity, it will of course be necessary to present credentials of a good moral character. Let these emanate from the county or State societies, accompanied by such other affidavits of the person's regularity and morality as are desired.

Let the day soon come when a physician can be gauged by a uniform standard acceptable anywhere in our grand nation!

Dr. E. F. Hamlin, of Slatersville, R. I., says:

"How may interstate reciprocity in licensing be best accomplished?" is a question which has received far too little consideration by the medical profession as a whole, and very little progress is being made at the present time; although some few States are reciprocating with one another now. Why should not all the States reciprocate with one another? It seems to me that some such agreement as this could be adopted.

Any reputable physician who has practiced medicine and surgery for three or more consecutive years in one locality, who is the legal possessor of a diploma, from a medical college of good standing, having a graded course covering four full years, who is a member of his local (county or district) medical society, State medical society, and American Medical Association, should be allowed to practice in any State he desires.

It seems to me such an agreement among the several States would be effective, for a physician with these qualifications would certainly be capable of practicing in any locality in the United States.

Dr. Hugh N. MacKechnie, of Chicago, writes:

Interstate reciprocity is a sore and perplexing problem. Not only in this free land of ours but in other countries is it causing much worry and annoyance both to the profession and the laity. Why a physician who lives on the borderland between two States is not allowed to attend a patient across the line is more than the lay mind can understand; and why a competent physician should not follow his profession in any and all parts of our united country is beyond the comprehension of the professional mind. We who are practicing in the central parts of the State do not fully appreciate the difficulties of the man along the boundary, nor yet do any of us who are fortunately located feel for the man who in search of health or for other reasons is compelled to go to another State, study the rudiments and try again an examination on subjects long since forgotten. Let us in our consideration

of these far reaching problems ever remember our less fortunate brother and temper the blast to the shorn lamb.

We scarcely need ask ourselves why such a condition of affairs exists. There appear to be but two reasons, namely, the varied medical standards, and the conservatism of the older States. The first is worthy of our consideration, the second forces itself upon us. We will not attempt to discuss the conditions except in so far as they would tend to a solution of our problem. With varying standards, then, and with the acknowledged conservatism how can we hope to secure reciprocity? There are three methods:

1. By two or more States agreeing upon a satisfactory basis for reciprocity.
2. Through a schedule drawn up by a national committee for acceptance by the various States.
3. By holding a national examination for all to take to secure a license.

The first method is being tried in certain parts but is making progress slowly. It appears difficult for neighboring States to agree upon a schedule and how much more difficult is it likely to prove when far distant States confer. At best it must be slow and for national purposes is almost surely doomed to failure.

The second method, like the first, is not of sufficient scope to become national. After the committee has completed its work and a schedule is adopted, it is optional with any or all States to accept or reject and we stand where we did in the beginning.

The third method overcomes the objections to the two former and supplies the deficiencies in them. By it we would have a national standard which would be recognized not only in our various States but in foreign countries. Through it we would have a basis on which to work for reciprocity with other countries. By it the conservative would be satisfied for it would bring all to the same level.

The outline of the plan is as follows: In the Surgeon General's Department at Washington a secretary would be located to take charge of all matters pertaining to medical examinations. There would also be a national board of examiners whose duty it would be to set papers and write standard answers for the guidance of the State examiners. They would also determine the standard of colleges whose students would be accepted for examination. These examiners, ten or more in number, would be apportioned to the various national medical associations according to membership and elected by them. There would also be a State secretary and a State board of examiners. The State secretary would look after medical matters in his State. The board of examiners would examine papers for the State. Examinations would be held semiannually and simultaneously throughout the country. Papers and a copy of the answers would be sent to the State secretaries. These men would hold examinations, then forward the candidate's papers and standard answers to the State examiners. Results would be returned to the State secretary who in turn would forward them to Washington.

Registration would be carried on and offenders prosecuted through the State board with the State

law amended to fulfil the requirements of the new federal law.

It appears to me then that reciprocity can be best accomplished through examination, for (1) It gives a more united profession; (2) it places all on the same level; (3) it removes many barriers hindering us from a full performance of our professional duty and (4) it gives us a national standard which we can cheerfully and proudly hold up to the world as a standard worth striving after.

Dr. N. Fay Tilton, of Marion, O., states:

The question of reciprocity in medical examinations between the States is one hard to solve, because of the different standards of requirements in the States. However, there is at least some common ground upon which all the States may meet.

They all, without exception, I think, demand that a physician be a graduate of a school which requires of its matriculates a course of study including all the essential and collateral branches of medicine and surgery; the number of branches a practitioner having studied varying according to the year of graduation.

As the various schools have nearly kept pace with one another in requirements the standard of the profession in the various States is not so far from equal.

The main point of difference is in the amount of preparatory work required for admission to a medical school. This being true it is not too much to expect that concessions from both sides could eliminate this difference.

The best plan undoubtedly would be to have the medical examinations under national control.

A central board at Washington should formulate the examination questions and send them to the different State boards. These in turn should put them before the applicants and afterwards send the papers to the national board for grading.

In this case the same requirements for examination would be demanded in the various States, and passing the national examination would permit the applicant to practice in any State or Territory. In passing I would suggest that the President appoint the examining board for a period of years; the board to consist of from three to twelve of the most eminent men of the profession, from different States, who could be appointed for varying terms of years so that new members would be elected every year. In this manner all the States would be represented in time.

The second plan would be for the examining boards of the various States to meet collectively and agree upon the question of requirements. As not more than four or five States are arbitrary in this matter, and as they have many more physicians graduating from their schools who wish to leave those States to practise in other States, the interstate pressure would unquestionably bring them into line on the reciprocity question. Having arranged this, a joint committee—let us call it No. 1—could be appointed for a specified time to receive from the various State boards lists of questions on subjects assigned to them by joint committee No. 2. The State boards should hold their examinations in the usual way and at specified times, sending the papers back to committee No. 1 for grading; where-

upon the proper officers previously selected by the joint boards could issue a certificate which would be honored by all the States meeting in the convention.

Dr. Irving T. Clark, of Rochester, N. Y., writes:

As the simplest and most practical method of securing interstate reciprocity in licensing, I would suggest the following, the minor details of which would of course require perfecting.

Create a national examining commission to be appointed by some authority, preferably the American Medical Association. This commission to be composed of recognized authorities on the various subjects in different reputable medical colleges located in different States. Each member of the commission to make up a list of questions on his subject, and, if necessary, an outline of what he would consider perfect answers. These lists to be made at stated intervals during the year, and sent to the chairman of the commission who would transmit a copy of the complete set to the examining board of each State, the States to hold their examinations simultaneously. Having been furnished with the questions, each State board would conduct the examinations as at present, including printing, examining and grading. An average of 75 per cent. or any other uniform minimum average required for passing to be adopted. The American Medical Association is to appoint one of its members in each State with authority to see that the examinations are properly conducted. Any laxity in grading or other irregularity in the conduct of the examination to be reported to the national examining commission and they in turn, after investigation, to notify the other State boards who could reject as unsatisfactory a license presented from the State in question.

The American Medical Association and its several State branches should endeavor to secure legislation in each State in effect as follows:

"Any person may obtain a license to practise medicine in this State upon presenting certificate of age, character, medical education, etc., etc., and, upon payment of fee of \$25 (or any other amount preferably, the same in each State) and, (a) upon passing satisfactorily an examination originated by the national examining commission and conducted by the medical examining board of this State, or (b) by submitting to the medical examining board of this State a license or certified copy of a license granted by the medical examining board of any other State, provided that such license was obtained by passing satisfactorily examinations originated by the national examining commission or was secured before the national examining commission examinations were conducted in the State which granted the original license—provided also that the State which issued the original license is in good standing with the national examining commission at the time the application for license in this State is made."

It might of course be possible that all of the States would not at first agree to this arrangement, but those which did would give the resident members of the profession a decided advantage, and, as the physicians in the "outside" States would naturally desire the same privileges, they would strive to have their legislators adopt the method and continue it.

Therapeutical Notes.

Ointment for Frostbite and Recent Wounds.—The following analgesic, hæmostatic, and antiseptic wound dressing is recommended by P. Reclus (*Journal de médecine interne*, January 15, 1906):

R	Vaselin,	200 parts;
	Antipyrine,	5 parts;
	Boric acid,	3 parts;
	Phenyl salicylate,	3 parts;
	Iodoform,	1 part;
	Phenic acid (crystals),	1 part;
	Corrosive sublimate,	0.50 part.
M.	Ft. unguentum.	

After cleansing the part with warm water, this is to be applied on gauze or lint. In frostbite this treatment is to be used twice daily.

Successful Treatment of Cancer of the Œsophagus.—Wendel (*Münchener medizinische Wochenschrift*, December 19, 1905), in a case of cancerous stricture of the œsophagus in a man, fifty-two years of age, who refused surgical operation, decided to use radiation. The patient was cachectic, and could only use liquid nourishment. The tumor was directly exposed to the x rays by means of the œsophagoscope, the introduction of the instrument being facilitated by local anæsthesia and a few drops of adrenalin. The x ray tube that was used was rather soft. In addition to the application of x rays, which lasted from five to ten minutes, the patient was given the following:

R	Quinina bihydrochlorat.,	0.40 gramme;
	Sodii arseniatis,	0.01 gramme;
	Aquæ destillatæ,	1.00 gramme.
M.	Ft. solutio. Sig.: for hypodermic use.	

This combined treatment (which had been introduced by Morton) is claimed to bring about rapid retrogression in epithelial malignant growths. In this particular patient, after eight treatments, the difficulty in swallowing was so much relieved that he could swallow ordinary food, which had been thoroughly masticated. The œsophagoscope could be introduced three centimetres farther into the œsophagus than at first. The patient had greatly improved in general condition, had gained three pounds in weight, and declared that he felt very much better. At the end of the treatment there was no visible ulceration.

Treatment of Mucous Enteritis in Infants.—Rousseau Saint Philippe (*Journal de médecine de Bordeaux* and *Journal de médecine interne*, January 15, 1906) looks with disfavor on bismuth, tannin, and ordinary astringents. Antipyrine, he declares, is not to be used, and opium only temporarily, and at the beginning, if the pains are very severe. Only the unirritating laxatives are admissible, neither calomel nor salines are given, except possibly in chronic and obstinate cases. He prefers pure castor oil as a cathartic, either given alone or associated with very fresh oil of sweet almonds. In cases lasting several weeks, ipecac is useful, given in small quantities in syrup every two hours, day and night. If there is fever, a little tincture of aconite is added. Where ipecac fails, he uses guaiana in syrup, made by

percolation (0.20 to 1 gramme in 120 to 150 grammes) in dessertspoonful doses given every hour for twenty-four hours. Guaiana may also be given in powder form. No irrigation of the bowel or injections are admissible. A liquid diet with diluent drinks and thin soups are employed; only very slowly resuming more substantial food. The latter should consist at first of milk, given with malt or barley water, then eggs, and thin soups and purées. In order to prevent constipation, which might bring on a relapse, the tincture of rhubarb is used as a laxative, or compressed tablets, as occasion requires.

To Avoid Irritation of the Kidneys from Large Doses of Salicylic Acid.—Frey, of Jena (*Münchener medizinische Wochenschrift*, 1905, No. 28), points out the fact that when the reaction of the urine is acid, salicylic acid is liable to cause albuminuria and casts. This can be avoided by the administration of alkalis, or of alkaline waters in conjunction with the salicylic acid.

Quinine Formate for Hypodermic Administration.—In a communication to the Société médicale des hôpitaux (*La Semaine médicale*, January 19, 1906), Hirtz mentioned the quinine formate as being especially suitable for hypodermic use. It is soluble in eight parts of water, and is given in doses of 0.20 gramme (in water 2 c.c.), injected into the subcutaneous areolar tissue. It is said to be not painful and causes no local reaction.

A New Method of Giving Iron.—Philip N. Randall, in the *British Medical Journal*, advises the following recommended by Dr. Meissner, of Berlin: The constituents of Blaud's pill are enclosed in an air tight gelatin capsule with cod liver oil. The idea is that the oil protects the gastric mucous membrane from irritation, as well as being useful when absorbed; that the carbonate of iron is produced in its nascent state in the stomach; and that the resulting sulphate of soda tends to counteract the constipating effect of the iron.

Guaiaicol Cacodylate as an Antipyretic.—At the meeting of the Société de thérapeutique, January 10, 1906, M. Burlureaux called attention to the special value of cacodylate guaiaicol in reducing temperature. He found that it was only soluble in water, in the proportion of five parts in a hundred. By the use of this solution, hypodermically, a very decided antithermic effect was observed, especially in the treatment of influenza. The injection is not quite painless, probably on account of a slight portion undissolved, remaining in suspension in the liquid.

The Administration of Remedies by Venous Injection.—De Speville, in a communication to the Société médicale de l'Elysée (*Journal de médecine de Paris*, January 1, 1906), defends the intravenous method of administering remedies when rapidity of action is required. In rheumatismal iritis, he mentioned a patient who was cured by ten injections of sodium salicylate into the veins. In severe cases of syphilis he prefers the mercuric cyanide to the corrosive chloride (of either the dose is generally less than .015 gramme and may go to .02 gramme, but not beyond). One centigramme, and sometimes less than this, may

excite intolerance, which is manifested five or six hours after the injection by a diarrhœa. In secondary syphilis, or in cerebral syphilis, it should be used especially when ordinary measures appear to be insufficient. In syphilitic and rheumatic affections of the eye it has an important field of usefulness. The intravenous method has also been recommended for the administration of serum. The technics should be carefully carried out, and the skin over the vein selected should be sterilized and the vessel compressed to make it prominent, generally the median basilic or cephalic vein is selected.

Treatment of Acute Rheumatism by Inunction.—Bourget (*Journal de médecine interne*, January 15, 1906) devised the following formula:

B. Acidi salicylici,
Adipis lanæ hydrosi, {ãã 10 parts;
Ol. terebinthinæ,
Adipis,80 parts.

M. To be applied with friction, to the skin, particularly around the joints affected.

The part is then wrapped in several thicknesses of flannel, and surrounded by water proof tissue, which is kept in place by a roller bandage. The methyl salicylate may also be used in a similar way, as suggested by Linossier and Lanois (3 to 5 grammes applied on a compress). The synthetic product is better for this purpose than the natural oil of wintergreen, which produces some irritation of the skin. Ethyl salicylate and amyl salicylate have also been similarly employed, but are inferior to the preceding. The latest preparations have soap for an excipient. A fatty soap, containing ten per cent. of salicylic acid combined with methyl salicylate, is especially recommended to be used with friction for muscular rheumatism.

Vegetable Bouillon for Enterogastritis.—A bouillon made of vegetables may with advantage take the place of milk for a considerable period (from two to eight days) in infants suffering with diarrhœa. It is made as follows:

Potatoes,60 parts;
Carrots,45 parts;
Turnips,15 parts;
Green peas,
Beans (dry),ãã 6 parts.

These are cut in small pieces and put in a quart of cold water and boiled for four hours in a covered stewing vessel. At the end of this time the liquid is strained off, and its quantity made up to a litre by the addition of boiled water. To this is added 5 grammes of sodium chloride. The resulting decoction has a yellowish color, an agreeable taste, and is readily taken by children. As a result of the use of this as an exclusive diet, there is a rapid improvement in the bowel discharges, which in a few days take again their normal appearance. Also, there is observed a steady increase in weight, probably owing to a rapid hydration of the tissues, which is favored by the sodium chloride in the bouillon. There may even be a slight œdema, which, however, rapidly disappears when the chloride is stopped. The milk diet is gradually resumed by adding it in increasing proportion to the broth, the quantity being ground by the appearance of the stools.

—*Le Nord médical*, January 15, 1906.

NEW YORK MEDICAL JOURNAL

INCORPORATING THE

Philadelphia Medical Journal
and The Medical News.*A Weekly Review of Medicine.*

Edited by

FRANK P. FOSTER, M. D.,
and SMITH ELY JELLIFFE, M. D.

*Address all business communications to***A. R. ELLIOTT PUBLISHING COMPANY,***Publishers.***66 West Broadway, New York.**PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, FEBRUARY 17, 1906.

THE MEDICAL DEPARTMENT OF THE ARMY.

On numerous occasions our voice has been raised in support of the commendable efforts of the department to secure adequate means of serving an army of the present force, to say nothing of the huge numbers that we might at any time be called upon to put into the field. The profession is thoroughly alive at all times to the necessity of augmenting the numerical strength of the medical corps, but it is not always and everywhere so insistent as it is justly entitled to show itself. The brilliant achievements of the Japanese army and navy medical organizations, recently brought to general attention, afford great hope of our being able to obtain the necessary Congressional action, but we attach particular importance to the awakening on the Pacific coast that is following that new interest in military matters brought about by the employment of local ports, shipyards, and sources of supply for portions of the army sent for service in the Philippines.

A notable earnest of such awakening was afforded by the *Medical Sentinel*, of Portland, Oregon, in its December number, in the form of an editorial article setting forth convincingly the needs of our army medical service. The accomplished editor of that journal, Dr. Henry Waldo Coe, is taking other measures also to incite his professional brethren to prompt and effective co-operation with the surgeon general—urging them to labor personally with their respective congressmen and with the members of the Senate and House committees on military affairs. After

recounting the vast preponderance of soldiers' deaths from disease over those from casualties—in all great wars save, on the Japanese side, the recent conflict between Japan and Russia—the *Sentinel* says:

Our soldiers, in times of war, are slaughtered by disease by the thousands. After the turf is laid upon their last resting place, a headstone is placed to mark the spot, the world moves on as before, nobody is punished, and no united effort is made on the part of mourning relatives to secure a reform. The father sheds a tear over the body of his promising son, a victim of typhoid fever. He has perhaps no other son to give to the remorseless juggernaut of disease; or he fondly hopes, if he has other sons, that no call for their services will be made by the country. The mother, who has perhaps lost her sole support, has no voice in the affairs of the nation, and would not know how to exercise it to advantage if she had such a voice. The newspaper reader who learns of the horrible decimation in the camps that have been selected by army officers, without consulting the medical department, and often against their ineffectual protests, is shocked for a few brief days, and acts as if disease were a visitation of God, for which there was no remedy and no means of prevention.

The picture is not overdrawn in the slightest; it is presented anew with every war into which we are drawn, and it has grown too familiar to be resented by the public as it ought to be unless measures are taken to rouse the people from their supineness. By no other class can such means be taken so effectively as by the medical profession, and on us rests the duty of resorting to them.

A LEGAL DEFINITION OF THE PRACTICE OF MEDICINE.

Judge Green, of New York, has recently promulgated a definition of the term practice of medicine. Many of our courts have shown a disposition to limit the meaning of the expression so as to make it cover only such practice as involved the administration of some drug. That of course is an absurdly inadequate definition, and it is difficult to see how the legal mind could ever have been satisfied with it. Judge Green's definition, though not a masterpiece, is a distinct improvement on those that carry the restriction mentioned. It is as follows:

The practice of medicine is the exercise or performance of any act, by or through the use of any thing or matter, or by things done, given, or applied, whether with or without the use of drugs or medicine, and whether with or without fee therefor, by a person holding himself or herself out as able to cure disease, with a view to relieve, heal, or cure, and having for its object the prevention, healing, remedying, cure, or alleviation of disease.

In spite of what we must regard as lameness of phraseology in this definition, we presume it will be interpreted as in the main identical with the medical profession's general conception, save for the fact that it seems to regard the practice of medicine as consisting wholly of therapeutics. There are instances, it seems to us, in which the announcement of a diagnosis or a prognosis may of itself be held to constitute an act of medical practice, for, if the patient is guided by it, the consequences may be momentous. Still, the courts move slowly, and each step in their progress is likely to bring us nearer to a satisfactory ruling.

THE PRESENT STATUS OF THE NEURONE THEORY.

In the ten years that have elapsed since Waldeyer first applied the term "neurone" to the anatomical unit of nerve action, many theories have been erected on the few fundamental facts which patient laboratory investigation has revealed as to the minute structures of the nervous system. In his most illuminating lecture before the Harvey Society, on January 27th, Professor Lewellys F. Barker, of Johns Hopkins University, reviewed the numerous hypotheses and the few facts that have been brought to light in explanation of the mysterious mazes of the nervous system. Two schools have been arrayed against each other, the "neuronists" and the "antineuronists." In spite of ingenious theories of the latter, the position of the neuronists is to-day the stronger one.

It is interesting to note the observation upon which the opponents of the neurone theory have based their arguments. It was the discovery by Apáthy, in 1899, of fine lines in the nerve structures of the leech that laid the foundation of this opposing doctrine. These fine filaments he termed neurofibrils, and he regards them, and not the axis cylinder, as the sole conducting elements. Other observers with newer methods of staining have confirmed the existence of these fine strands. The method of Ramón y Cajal and the still more recent method of Donaggio have revealed these neurofibrils as a fine network in the nerve cell, from which they pass into the axis cylinder process in numerous fine fibrils. That these fibrils represent the essential paths for the conduction of nerve impulses has not yet been proved.

In 1898 F. Nissl drew upon his imagination in constructing the hypothesis of the "neural gray," with which he sought to shatter the

teachings of the neurone theory. Although it had never been seen, the neural gray was held to be a delicate reticulum of fine fibres pervading the gray matter of the nervous system, from which network the axis cylinder processes of the nerve cells originate. According to this view the nerve cell has only a nutritive or metabolic function.

The mode of transmission of the nerve impulse from one neurone to another has always been a perplexing problem and still baffles explanation. Held supposed that the dendrites came into relation with neighboring nerve cells in two ways—first, by an anastomosis of their terminal filaments, and, second, by direct continuity of the fibrillar network of the cells. The method of Golgi revealed a fine plexus of fibres around the nerve cells, and in the meshes of this network are little knotlike bodies, the "neurosomes." These Held regarded as the "end feet" of the neighboring dendrites. Still more recently these have been termed the "terminal buttons of Auerbach." According to Professor Barker there is probably no continuity of structure between the terminal buttons of the dendrites and the contiguous cells, but it is not impossible that a layer of protoplasm may lie between them.

The antagonists of the neurone theory have also put forth the contention, founded on actual observation, that the axis cylinder process, cut off from its own cell, can undergo regeneration. This doctrine of so called "autoregeneration" has been shattered by recent experiments in which it has been shown that the degenerating nerve exerts a tactic influence upon the collateral branches of neighboring nerve fibres, which unite with the former, thus rendering possible its regeneration.

Moreover, it has been maintained that the axis cylinder process does not develop from a single cell, but is the result of the fusion of many cells joined end to end. This pluricellular, or catenary, theory seemed to be supported by embryological observations, but it remained for an American, Ross Randall Harrison, to shatter the ingenious supposition. In 1904 he showed by means of a series of difficult experiments that the chains of uniting cells were really the sheath cells of the nerve fibre. Thus the tendency of modern research is toward the view that the neurone is an anatomical and a physiological unit. All else that has been attributed to the finer intracellular structures is hypothesis, which direct observation has not yet been able to substantiate.

THE PROSPECT OF A PROTECTIVE SERUM AGAINST RELAPSING FEVER.

In relapsing fever the spirillum, or spirochæta of Obermeier, appears in the blood just before and during the attacks of fever, disappearing in the interval. By means of the infected blood the disease has been communicated from one person to another and in a similar way to monkeys. In the latter the organism has been found in the spleen, bone marrow, lymph glands, liver, and kidneys. More recently Norris, Pappenheimer, and Flourney, of the Pathological Laboratory of Bellevue Hospital, have made a study of a spirochætal infection of white rats, produced by inoculation with the blood of a person with relapsing fever. Their preliminary communication upon this subject was read recently before the Society of American Bacteriologists. The inoculation was followed in the course of two or three days by the appearance of spirochætæ in the blood which persisted for one or two days. With the exception of swelling of the spleen, however, the rats showed no obvious signs of illness, and no relapses occurred. These observations clearly showed that immunity was conferred by previous infection. It was determined that, whereas inoculations of spirochætal blood, *plus* small doses of serum from animals that had gone through a previous infection, retarded or completely inhibited the development of the spirochætæ in the blood, the subcutaneous injection of serum, followed several days later by an injection of spirochætal blood, did not, in the few experiments made, prevent the development of the infection in rats. Better success attended the efforts of F. G. Novy and P. S. Knapp, of the University of Michigan, who at the same meeting presented a study of the *Spirochæta Obermeieri*. They had found that the blood of rats which had been given repeated injections of spirochætal blood exerted a most marked preventive and curative action. Even when the immune blood is injected ten, twenty-five, and thirty-six hours after inoculation with spirochætæ, that is to say, at any time before the spirochætæ actually appear in the blood, they will fail to appear, whereas in the controls they become numerous. The curative action of the immune blood is equally pronounced (*Science*, February 9th). At the meeting there were shown rats with spirochætæ demonstrable in their blood. An injection of two cubic centimetres of immune blood was "followed within one hour by a total disappearance of the spirochætæ from the circulation." The application of this discovery to the treatment of relapsing fever and the tick fever will doubtless soon follow, and, if it should prove applicable to man

as it is to the white rat, it will afford a method of both prevention and successful treatment only to be compared to that of diphtheria with antitoxine.

SOME STATISTICAL ASPECTS OF THE CON- JUGAL STATE.

Rarely have vital statistics been fraught with more profound interest to physicians than those published by A. O. Powys in *Biometrika* for November, 1905. Connected with the statistician's office in Melbourne, he has carefully analyzed the various returns of New South Wales relating to the age at marriage, offspring, longevity, etc., extending over the period from 1894 to 1902, and his deductions, in some respects coinciding with those drawn from empirical observation, merit careful attention. In general, it is found that the married state is more conducive to longevity than celibacy. It would be interesting to determine, if possible, to what extent this prolongation of life is dependent upon the normal exercise of the sexual function, and to what extent upon the regularity and temperance associated with the married state. Upon this point, however, the figures are clear, namely, that, in males principally, early marriage is apparently unfavorable to longevity. Two causes that operate against longevity are excessive fertility in women and the mental strain associated with the rearing of large families. The latter only of these causes is operative in the male.

One of the most important and interesting phases of this statistical study was the investigation of the relationship between the size of the family and the longevity of the parents. Powys finds that up to the age of sixty-seven in women there has been an increasing average family. On the other hand, the longer lived women, sixty-five years old and upward, have generally had rather smaller families. In a woman at the age of forty-five the expectation of life increases in proportion to the number of children she has borne, up to five or six children, and then decreases, so that childless women and mothers of extremely small and extremely large families have a shorter expectation of life than mothers of moderately large families. Apart from economic and racial advantages, the family of five would seem to be the ideal one, if the best prospects of life in the parent are to be taken into account. As causes of the shortened life associated with the smaller number of offspring Powys mentions the inferior physique of unprolific women generally, and chiefly the prejudicial effort to prevent and limit families.

It is to the latter efforts that the Royal Commission appointed by the government of New South Wales attributed the decline in the birth rate. To this conclusion Powys does not assent. But he agrees with Karl Pearson in holding that "fifty per cent. of the next generation is being produced by twenty-five per cent. of the present generation," and that the tendency is for society to be recruited from below. The close similarity, in this respect, of the two sets of statistics, one for Europe and the other for New South Wales, is sufficient to establish this conclusion as a valid scientific deduction which may well depress the hopes of the most ardent optimist.

Other interesting figures are those that concern the relationship between the age of marriage and the fecundity of the parents. In women, the effect of delayed marriage is to cause atrophy of the generative organs. This is shown by the fact that, of marriages contracted under the age of twenty-five, only 2.5 per cent. are sterile at the end of the reproductive period, while for marriages contracted between the ages of twenty-five and thirty-five, or at a mean age of 28.4 years, the percentage is nearly twelve. Of marriages consummated at the mean age of 38.4 years, nearly sixty per cent. are sterile.

EUTHANASIA.

The ill advised introduction of a bill into the Ohio legislature, at the behest of some crack-brained sentimentalist, to permit the taking of life by physicians under some circumstances, has caused much discussion of the silly season order in the newspapers. The use of the word euthanasia in connection with such a barbarous and gruesome proposal is clearly a misnomer. Its correct designation would be legalized homicide, and carried into effect it would constitute a reversion to the inhuman practices of savagery and the Draconian laws of the Spartans, which the civilized world has long since outgrown. It is difficult to conceive of any physician so lost to the best traditions and plain teachings of his profession as to exercise such a repulsive privilege, even if there were any chance of a revolting measure of the kind becoming a law.

Euthanasia, rightly understood, however, has from time immemorial been practised by the best physicians, and it is often the doctor's last merciful duty to his patient. It is right to alleviate with all the resources of our art the agony of a moribund sufferer, and in so doing the wise physician only follows the course of Nature herself, who is generally kind enough to envelop in

grateful oblivion the grand climacteric of death. Most men are fortunately as little conscious of their death as of their birth. In the exceptional cases attended by mental or physical distress it is the physician's obvious duty, as at other times, to save his patient needless suffering. The measures he employs for this legitimate purpose must never prejudice to the slightest degree, however, any slender chance of recovery which may remain. Intelligently administered, they will, on the contrary, by substituting a comfortable degree of euphoria for pain and shock, often tend to conserve the waning vitality a little longer.

DEATH FROM EMBOLISM DURING ANÆSTHETIZATION.

A death occurring during the administration of an anæsthetic is not necessarily due to the effects of the agent employed. This obvious fact is sometimes overlooked when a fatal accident occurs upon the operating table. Guinard recently reported to the Paris Société de chirurgie (*Journal de médecine interne*, January 15th) a death during the administration of chloroform which was found to have been actually caused by embolism. At the autopsy an old clot was found attached to the chordæ tendineæ of the right side of the heart. There were also found old clots in the hypogastric and iliac vessels. The patient was about to be operated upon for a collection of pus in the pelvis. The heart, embarrassed by the presence of a clot which had become separated from the thrombus in the pelvic region, was unable to continue its function. Without the post mortem examination the death would unquestionably have been attributed to the chloroform.

THE "ETHICAL PREPARATION."

We sometimes read that a certain medicinal preparation is "ethical" and that a certain other one is "unethical." We doubt if, strictly speaking, it is proper to apply either term to an inanimate object like a drug. If we regard ethics as a system by which we ascertain our duty to our fellow men, and in accordance with which we perform that duty, our duties are ethical inasmuch as they are deduced from ethics, and we ourselves are ethical in so far as we conform to ethics. But in using any drug, no matter what it may be, we neither conform to the requirements of ethics nor violate them. We doubt if even the stiffest of trade unionists would look upon a burglary as venial because the burglar was able to prove that his jimmy bore the union label. It is acts that call for commendation or censure, not the tools with which they are performed.

News Items.

NEW YORK CITY AND STATE

Personal.—Dr. Allen Fitch has resumed practice at No. 38 West Fifty-sixth Street, New York, after an absence of two years.

The Buffalo Academy of Medicine.—At a meeting of the Section in Pathology, held on Tuesday, February 13th, the programme included a paper on the Clinical Examination of Faces, by Dr. Richard Weil, of New York. Dr. A. E. Woehner was to open the discussion.

The Medical Society of the County of Richmond, N. Y.—A meeting was called for Wednesday, February 14th, at the Staten Island Academy. The business to be brought before the meeting was the discussion and adoption of the new constitution and by laws rendered necessary by the recent consolidation of the two State societies.

The New York Pathological Society.—The following programme was arranged for a meeting held on Wednesday, February 14th: Isolation of Meningococcus from the Knee Joint of a Case of Scarlet Fever, by Dr. A. Wadsworth; Brain Tumors, by Dr. J. H. Larkin; The Action of Photodynamic Substances, by Dr. Simon Flexner; A Case of Exophthalmic Goitre, by Dr. F. C. Wood; Further Studies on Spirochæta, by L. B. Goldhorn.

The Medical Society of the County of New York will celebrate its centennial anniversary by a dinner at the Hotel Astor, on the evening of Wednesday, April 4th. A full representation is desired, and it is requested that members of the society will notify one of the committee of arrangements of their intention to be present at as early a date as possible. Dr. Walter Lester Carr, 68 West Fifty-first Street, chairman; Dr. H. S. Stearns, 45 West Fifty-eighth Street, and Dr. J. S. Thacher, 839 Madison Avenue, committee of arrangements.

The Medical Society of the County of Rensselaer, N. Y.—The programme for the centennial celebration of this society, to be held on February 22nd, includes the following papers: The Early Diagnosis and Treatment of Pulmonary Tuberculosis, by Dr. Lawrason Brown, of Saranac Lake cottage sanitarium; The Pathogenic Protozoa, with lantern slide exhibition, by Dr. Richard M. Pearce, director of the Bender Hygienic Laboratory, Albany; A Discussion of Some of the Immediate and Some of the Late Consequences of Cranial Injuries and Their Treatment, by Dr. Harvey Cushing, associate professor of surgery, Johns Hopkins Medical School, Baltimore, Md.

Bequests to Hospitals.—By an order of the Supreme Court permitting the adjustment of a contest, and in accordance with the provisions of the will of Marguerite A. Jones, who died on July 11, 1905, leaving an estate valued at \$900,000, after making certain bequests amounting to about \$90,000, and leaving the income of \$10,000 to a nephew, the residuary estate was left to the Presbyterian Hospital, St. Luke's Hospital, and the Postgraduate Medical School and Hospital, all of New York city. Collateral heirs contested the will on the ground that the testatrix was not competent to make a will. By the terms of the agreement just made, the estate outside of the special bequests, is to be divided into halves, the three hospitals to receive one half and the contestants the other half.

The Medical Association of the Greater City of New York.—At a meeting of this association held on Monday, February 12th, the following was the order of exercises: A Symposium on Public Water Supplies and Sewage, arranged as follows: Filtration of Public Water Supplies, by Major Cassius E. Gillette, Engineer Corps, U. S. A.; Public Water Purification in Massachusetts, by Dr. Charles Harrington, secretary of the Massachusetts State Board of Health; On the Problems of the Public Water Supply of New York City, by Ernest J. Lederle, Ph. D., member of the State Water Supply Commission; Sewage in Its Relation to Health, by Dr. Herbert E. Smith, dean of the Faculty of Medicine, Yale University; Ultimate Disposal of Sewage, by George A. Soper, Ph. D., member of the State Sewage Commission; general discussion, by Dr. Thomas Darlington, George C. Whipple, C. E., Dr. Hermann M. Biggs.

The Medical Society of the County of Onondaga, N. Y.—At the quarterly meeting held at Syracuse, on Tuesday,

February 13th, the following programme was presented: Report of a Case of Gallstones, with Operation, by Dr. A. B. Breese, of Syracuse; Country vs. City Practice, by Dr. Edward B. Kaple, of Elbridge; Laboratory Aid in Diagnosis, by Dr. William H. May, of Syracuse; Chronic Diarrhoea Due to Faulty Stomach Secretion, by Dr. I. Harris Levy, of Syracuse. Attention was called to the plans which the committee has prepared for the centennial meeting in May. The entire day will be devoted to this meeting. The programme will include addresses by men of letters and scientific men of national reputation. A centennial medal has been prepared, which has been accepted by the society. These medals may be procured at a cost of one dollar each. All who desire them are requested to notify the secretary, Dr. G. R. Broad, at their earliest convenience.

Announcement of Scholarships and Fellowships in the Rockefeller Institute for Medical Research, New York.—The Rockefeller Institute for Medical Research purposes to award for the year 1906-7 a limited number of scholarships and fellowships for work to be carried on in the laboratories of the institute in New York city, under the following conditions: The scholarships and fellowships will be granted to assist investigations in experimental pathology, bacteriology, medical zoology, physiology and pharmacology, and physiological and pathological chemistry. They are open to men and women who are properly qualified to undertake research work in any of the above mentioned subjects and are granted for one year. The value of these scholarships and fellowships ranges from six hundred to one thousand dollars. It is expected that holders of the scholarships and fellowships will devote their entire time to research. Applications accompanied by proper credentials should be in the hands of the secretary of the Rockefeller Institute, Dr. L. Emmett Holt, 14 West 55th Street, New York city, not later than April 1, 1906. The announcement of the appointments is made about May 15th. The term of service begins preferably on October 1st, but, by special arrangement, may be begun at another time.

The Mortality of New York State in 1905.—According to the annual bulletin of vital statistics, issued by the State department of health, there were reported 137,059 deaths in 1905, and the returns of 175 were delayed. This made a death rate of 17.4 in 1,000 population, or about the average for the last five years, against 18.2 in 1904, which was unusually high. There was a daily average of 376 deaths, against 380 in 1904 and 350 in 1903. Pneumonia was the chief cause of death, causing 14,157 fatalities, against 13,531 in 1904, and 9,000 in 1903. It exceeds all deaths from diseases of the nervous system and almost equals all from diseases of the circulatory system. There were more than 8,000 deaths from pneumonia in the first five months, and in November and December it again increased largely, 10.4 per cent. of the deaths of the year being from this cause, against 9.5 per cent. in 1904. Of epidemic diseases, the most notable thing has been the continuance and more extended prevalence of cerebrospinal meningitis from the excess of last year; the mortality was 2,566, against 1,700 in 1904, the average being in former years 550. Scarlet fever, after four years of high mortality, has suddenly decreased by half. Diphtheria has the smallest mortality of any year on record. Typhoid, although persistent in several cities, has caused fewer deaths during the year than in the two preceding; but its mortality never varies far from the average. Smallpox broke out in a few localities, with only nine deaths. Epidemic diseases caused 13.5 per cent. of the mortality. Consumption caused 10 per cent. of the deaths and 175 deaths in 100,000 population. In the maritime districts there were two deaths in 1,000 living and in the southern tier district less than one. Its increased mortality for the last two years has been universal because of the prevalence of grippe. The infant mortality was 27.5 per cent. of the total—38,000 deaths under the age of 5 (1,000 less than last year). Bright's disease caused 8,870 fatalities.

Meetings of Sections of the New York Academy of Medicine.—The following was the programme for a meeting of the Section in Orthopaedic Surgery, held on Friday, February 16th: Presentation of Patients; (a) Injury of Semilunar Cartilage; Extirpation; Cure, by Dr. Henry Ling Taylor; (b) Chondromata (?) of Ankle, with X Ray and Photographs of Specimens, by Dr. Henry Ling Taylor; (c) A Case of So-Called Arthritis Deformans in a Child, by Dr. P. William Nathan; (d) Multiple Chondromata, by Dr. William Nathan; Paper: Mechanico Therapy in the

Treatment of Infantile Paralysis, by Dr. Charles H. Jaeger; Paper: **The Surgical Treatment of Infantile Paralysis** (by invitation), by Dr. R. Tunstall Taylor, Baltimore, Md.

The *Section in Ophthalmology* will hold a meeting on Monday, February 19th, with the following order: Presentation of Patients: (a) Case Showing Result of Killian's Operation for Frontal Sinus Disease, by Dr. E. Gruening; (b) Acute Glaucoma Operated by Heine's Method of Cyclo-dialysis, (c) Treatment of Gonorrhœal Ophthalmia by Torrey's Serum, by Coleman W. Cutler; Papers: (a) Congenital Word Blindness in Pupils of the Public Schools, by Dr. A. Schapinger; (b) On Two Cases of Word Blindness, By Dr. J. Herbert Claiborne; (c) On the Localization of Foreign Bodies in the Eye and Orbit, with Lantern Slide Illustration, by Dr. George Sloan Dixon; discussion by Dr. E. Gruening, Dr. J. E. Weeks and others.

The *Section in Medicine* will meet on Tuesday, February 20th, with the following programme: Presentation of Patients: (a) Progressive Muscular Dystrophy; (b) Progressive Muscular Atrophy, by Dr. Charles E. Nammack; Papers: (a) The Use of Hydrotherapy in the Treatment of the Insane, by Dr. George B. Campbell; (b) The Effect of Surgical Operations Upon Those Insane, by Dr. Le Roy Broun; (c) Operative Surgery Upon the Insane, by Dr. Warren S. Bickham; (d) Some Remarks on the Relations of the Gastrointestinal Tract to Nervous and Mental Diseases, by Dr. Robert Coleman Kemp; discussion by Dr. W. H. Thomson, Dr. M. Allen Starr, Dr. John A. Wyeth, Dr. Bernard Sachs, Dr. Simon Baruch, Dr. Brooks H. Wells, Dr. Samuel Lloyd, Dr. Achilles Rose, Dr. George W. Jarman, and others.

The *Section in Obstetrics and Gynecology* will hold a meeting on Tuesday, February 20th, with the following order: Presentation of Patients; Demonstration of Specimens; discussion on the Treatment of Uterine Retrodisplacements; (1) Orthopedic Treatment; (a) Pessary; (b) Tampon; (c) Massage; (d) Postural. (2) Surgical Treatment; (a) Intra-abdominal; (b) Extra-abdominal; (c) Vaginal. (3) Dystocia Resulting from Surgical Correction; Dr. Grandin, Dr. Goff, Dr. Marx, Dr. Vineberg, Dr. Le Roy Broun, Dr. West, Dr. Flint, Dr. Edgar, Dr. Seeligman, Dr. Voorhees, and other members of the section; New Instruments; Executive Session.

The *Section in Genitourinary Diseases* will meet on Wednesday, February 21st. The following programme will be presented: The unfinished discussion from the last meeting; (a) The Surgical Treatment of Vesical Calculus, by Dr. William K. Otis; (b) The Surgical Treatment of Renal Calculus, by Dr. Ramon Guiteras; Presentation of Patients: (a) A Case of Calculus of the Pelvic Ureter, by Dr. Howard Lilienthal; (b) Nephrectomy for Nephrolithiasis Combined with Renal Papilloma, by Dr. Willy Meyer; (c) A Case of Hypernephroma with Metastasis Following Operation, by Dr. Albert A. Berg; Presentation of specimens: (a) Multiple Renal Calculi, Secondary Nephrectomy for Renal Fistula, by Dr. Charles H. Chetwood; (b) Kidneys Showing Multiple Infarcts, by Dr. George E. Brewer; (c) Hypernephroma, by Dr. Albert A. Berg; Presentation of instruments: An Instrument for the Inspection and Treatment of the Male Bladder, by Dr. Follen Cabot.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending February 10, 1906:

	-February 10 -		-February 3.-	
	Cases.	Deaths.	Cases.	Deaths.
Measles	1,399	19	1,489	52
Diphtheria and croup	422	49	378	39
Scarlet fever	215	16	208	7
Smallpox	1	1	1	1
Chickenpox	151	1	150	1
Tuberculosis	319	161	313	178
Typhoid fever	34	7	41	3
Cerebrospinal meningitis	20	17	28	17
	2,591	299	2,667	296

Society Meetings for the Coming Week:

MONDAY, February 19th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, February 20th.—New York Academy of Medicine (Section in General Medicine); New York Academy of Medicine (Section in Obstetrics and Gynecology); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, February 21st.—New York Academy of Medicine (Section in Genitourinary Diseases); New York Society of Dermatology and Genitourinary Surgery (private); Woman's Medical Association (New York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, February 22nd.—New York Orthopædic Society; New York Celtic Medical Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, February 23rd.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, February 24th.—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

PHILADELPHIA AND THE MIDDLE STATES.

Change of Address.—Dr. Lambert Ott, to 831 North Broad Street, Philadelphia.

The **Northwestern Medical Society** held its annual banquet at Kugler's, on the evening of February 5th. Dr. Luther C. Peter was elected president.

The **State Hospital for the Insane at Norristown, Pa.**, will soon begin the erection of a three-story building to be known as the Women's Convalescent Building.

Personal.—Dr. Clara Marshall has resigned the chair of materia medica and therapeutics in the Woman's Medical College of Pennsylvania. Dr. Marshall will retain the position of Dean of the college which she has filled so creditably for the past thirty years.

The **Annual Meeting of the Medical Society of the Woman's Hospital of Philadelphia** was held on January 20th. The following officers were elected: President, Dr. Frances C. Van Gasken; vice-president, Dr. Clara T. Dercum; treasurer, Dr. Miriam M. Butt; secretary, Dr. Ellen C. Potter.

Philadelphia Polyclinic and College for Graduates in Medicine.—The following statistics represent the work done at the Polyclinic Hospital during January, 1906: Patients admitted to house, 130; patients discharged, 98; new patients treated in dispensary, 1,736; total visits to dispensary, 8,229; accident ward, 700. Dr. Marcus Haase, of Memphis, Tenn.; Dr. W. R. Bathurst, of Prescott, Ark.; Dr. Alice Lillibridge, of Olyphant, Pa.; and Dr. Edward V. Weller, of Crafton, Pa., are registered at the college.

Charitable Bequests.—By the will of Nannie M. Fidler, the Home for Incurables receives \$5,000 for the establishment of a free bed in the women's cancer ward.

By the will of James C. Cromley, the House of the Good Shepherd and St. Vincent's Home receive \$300 each.

By the will of Elizabeth S. Guss, of Westchester, Pa., the Wills Eye Hospital receives \$100.

By the will of Adam W. Louth, St. Agnes's Hospital receives \$7,000 for the endowment of the Mary Louth free bed.

The **Section in General Medicine of the College of Physicians of Philadelphia.**—At a meeting held on Monday, February 12th, the following programme was presented: A Case of Scleroderma, with Exhibition of Patient, by Dr. David Riesman; Hysterical Neuroses of the Stomach and Exhibition of Patient with Rhythmic Borborygmus of Hysterical Origin, by Dr. James H. Lloyd; Report of a Case of Pulmonary Abscess Followed by Recovery Without Operation, Together with a Study of the Case by Means of the X Rays, by Dr. James M. Anders and Dr. G. E. Pfahler; Recent Therapeutic Experiences with Pneumonia, by Dr. S. Solis-Cohen.

Scientific Society Meetings in Philadelphia for the Week Ending February 24, 1906.—Monday, February 19th, Medical Jurisprudence Society; Northeast Branch, Philadelphia County Medical Society. Tuesday, February 20th, Section in Ophthalmology, College of Physicians; Dermatological Society; Academy of Natural Sciences; North Branch, Philadelphia County Medical Society. Wednesday, February 21st, Section in Otology and Laryngology, College of Physicians; Association of Clinical Assistants of Wills Hospital; Franklin Institute. Thursday, February 22nd, Pathological Society; Entomological Section, Academy of Natural Sciences; Section Meeting Franklin Institute. Friday, February 23rd, Northern Medical Association; South Branch, Philadelphia County Medical Society.

The Health of Philadelphia.—During the week ending February 3, 1906, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Maternal fever	1	0
Typhoid fever	314	21
Scarlet fever	65	0
Chick-pox	83	0
Diphtheria	100	13
Cerebrospinal meningitis	1	1
Measles	1,684	26
Whooping cough	41	7
Tuberculosis of the lungs	131	55
Pneumonia	205	98
Erysipelas	11	1
Pyæmic fever	3	0
Tetanus	1	1
Septicæmia	1	0
Dysentery	1	0
Mumps	9	0
Cancer	18	21

The following deaths were recorded from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 9; diarrhea and enteritis, under two years of age, 27. The total deaths numbered 571, in an estimated population of 1,469,126, corresponding to an annual death rate of 20.21 in 1,000 population. The total infant mortality was 163; under one year of age, 116; between one and two years of age, 47. There were 36 still births; 18 males and 18 females. The temperatures were moderate until the end of the week, when the thermometer fell to 12°.

BOSTON AND NEW ENGLAND.

The Mortality of Boston.—The number of deaths reported to the board of health for the week ending February 3rd, was 233, as against 213 the corresponding week last year, showing an increase of 20 deaths, and making the death rate for the week 20.42. The number of cases and deaths from infectious diseases is as follows: Diphtheria, 38 cases, 4 deaths; scarlatina, 27 cases, 1 death; typhoid fever, 8 cases, 2 deaths; measles, 203 cases, 2 deaths; tuberculosis, 49 cases, 30 deaths; smallpox, no cases no deaths. The deaths from pneumonia were 38, whooping cough 2, heart disease 30, bronchitis 5, marasmus 4. There were 8 deaths from violent causes. The number of children who died under one year of age was 36, under five years of age, 59, persons over sixty years of age 62, deaths in public institutions 82.

The Warren Triennial Prize of the Massachusetts General Hospital.—The Warren Triennial Prize was founded by the late Dr. J. Mason Warren in memory of his father, and his will provides that the accumulated interest of the fund shall be awarded every three years to the best dissertation, considered worthy of a premium, on some subject in Physiology, Surgery, or Pathological Anatomy, the arbitrators being the physicians and surgeons of the Massachusetts General Hospital. The subject for competition for the year 1907 is on some special subject in Physiology, Surgery, or Pathology. Dissertations must be legibly written and must be suitably bound, so as to be easily handled. The name of the writer must be enclosed in a sealed envelope, on which must be written a motto corresponding with one on the accompanying dissertation. Any clew given by the dissertation, or any action on the part of the writer which reveals his name before the award of the prize, will disqualify him from receiving the same. The amount of the prize for the year 1907 will be \$500. In case no dissertation is considered sufficiently meritorious, no award will be made. Dissertations will be received until April 14, 1907. A high value will be placed on original work.

BALTIMORE AND THE SOUTH.

The Taliaferro (Ga.) County Medical Society was organized at Crawfordville on Tuesday, February 6th, with

the following officers: President, Dr. A. C. Davidson, of Hillman; secretary, Dr. A. G. Beazley, of Crawfordville, and Dr. Brown, Dr. Rhodes, and Dr. Power, censors.

The Little Kanawha and Ohio Valley Medical Society held its monthly meeting at Parkersburg, West Virginia, on Thursday, February 1st. The paper of the evening was by Dr. Louis F. Keever, of Parkersburg, the subject being Bright's Disease. A full and interesting discussion followed the reading of the paper.

The Talbot (Md.) County Medical Society.—At the annual meeting held at Easton, on Wednesday, January 31st, the election of officers resulted as follows: President, Dr. Julius A. Johnson, of Easton; vice-president, Dr. Edward A. Trippe, of Easton; secretary and treasurer, Dr. Philip L. Traverse, of Easton; board of censors, Dr. Wilson S. Kennedy, of Tilghman, Dr. Samuel C. Trippe, of Royal Oak, Dr. Charles H. Rose, of Cordova; delegate to the Medical and Chirurgical Faculty of Maryland, Dr. James A. Stevens, of Oxford.

The Mortality of Baltimore.—The report of the health department for the week ending February 3, 1906, showed a total of 218 deaths, as compared with 214 deaths in the corresponding week of last year, 216 in 1904, and 245 in 1903. The annual death rate in a thousand of population was: Whole, 19.48; white, 17.59; colored, 29.55. The principal causes of death were: Typhoid fever, 4; scarlet fever, 1; whooping cough, 5; diphtheria, 1; influenza (la grippe), 5; consumption, 27; cancer, 14; apoplexy, 11; organic heart diseases, 18; bronchitis, 3; pneumonia, 24; diarrhoea, 3; Bright's disease, 18; congenital debility, 8; lack of care, 3; old age, 3; suicide, 1; accidents, etc., 13. The nativity of the decedents was United States, white, 132; foreign, 33; colored, 50; unknown, 3. Ten deaths occurred at Bay View Asylum; 34 in hospitals, and 7 in other institutions. The following number of cases of infectious diseases were reported, as compared with the corresponding week of last year:

	1905.	1906.
Diphtheria	30	38
Pseudomembranous croup	1	0
Scarlet fever	15	16
Typhoid fever	6	11
Measles	13	3
Mumps	3	0
Whooping cough	0	19
Chick-pox	8	3
Consumption	13	18

The cases of whooping cough and the increase in the number of diphtheria patients may in some measure be attributed to the mild winter.

CHICAGO AND THE WEST.

The Minnesota Academy of Medicine.—At a meeting held at St. Paul, on Wednesday, January 31st, the programme included a paper on Dilatation of the Stomach, by Dr. George D. Head, of Minneapolis, and one on Cancer, by Dr. William H. Mayo, of Rochester.

The Ramsey (Minn.) County Medical Society.—At the annual meeting held at St. Paul on Tuesday, January 30th, officers for the ensuing year were elected as follows: President, Dr. Burnside Foster; vice-president, Dr. Paul B. Cook; secretary and treasurer, Dr. Frederick Leavitt; necrologist, Dr. A. F. Whitman; trustees of the building fund, Dr. Cornelius Williams and Dr. Burnside Foster.

GENERAL.

The Second Congress of the German Röntgen Society will be held in conjunction with the congress of surgeons at Berlin, on April 8 and 9, 1906. Physicians who desire to read papers or make demonstrations must notify the chairman, Professor Dr. Eberlein, 56 Luisenstrasse, Berlin N. W. 6, or the secretary, Dr. Max Immelmann, 72 Lützowstrasse, Berlin N. W. 35, before March 1, 1906.

Army Medical Corps Examinations.—Preliminary examinations for the appointment of assistant surgeons in the army will be held on May 1 and July 31, 1906, at points to be hereafter designated. Permission to appear for examination can be obtained upon application to the Surgeon General, U. S. Army, Washington, D. C., from whom full information concerning the examination can be procured. In order to perfect all necessary arrangements for the examinations of May 1st, applications must be complete and in possession of the Surgeon General on or before April 1st. Early attention is therefore enjoined upon all intended applicants. There are at present twenty-five vacancies in the medical corps of the army.

Pith of Current Literature.

AMERICAN MEDICINE.

February 10, 1906.

1. Arteriosclerosis as a General Disease, By ALFRED STENGEL.
2. Asthma: A Report on the Pathology and Treatment of Some Interesting Cases, By JAMES R. ARNEILL.
3. The Problem of Psychiatry in the Functional Psychoses (*Concluded*), By EDWARD COWLES.
4. The Treatment of Mediastinal Carcinoma with the Röntgen Rays, By G. E. PFAHLER.
5. Case of Cerebrospinal Meningitis: A Plea for More Thorough Examination of the Spine in Cases in Children which Appear to be Pneumonia, By GEORGE C. MERRIMAN.
6. The Edibility of Animal Spleens, By EDWARD T. WILLIAMS.

1. **Arteriosclerosis as a General Disease.**—Stengel recognizes three stages of arteriosclerosis considered as a general disease: 1. A preliminary one, difficult of recognition in its beginnings and confusing to the clinician in his efforts to distinguish what the ætiological factors have contributed to the symptom complex and what part has resulted from the arterial disease itself. 2. A middle period, during which the arterial disease is easy to recognize, but in which secondary organic changes have a rôle of variable importance. During this stage the diagnosis of arteriosclerosis is usually established and rarely offers serious difficulty. Only when undue attention is given to some local disturbance, such as albuminuria, palpitation, or vertigo, or when the vascular disease is so uniformly distributed that it manifests itself only in a general failure of vitality, is the recognition of the disease likely to occasion confusion. 3. A final stage of failure of circulation, organic failure, and terminal infections. In this period the contributory influence of the hardened bloodvessels rarely escapes attention.

4. **The Treatment of Mediastinal Carcinoma with the Röntgen Rays.**—Pfahler has treated six patients with carcinoma of the mediastinum, secondary to carcinoma of the breast. In all of his six cases there had been improvement. Three patients died later; they were too far advanced to hope for a cure, and three are either well or nearly so. Even if these should never get well, their life has been very much prolonged and made more comfortable than could have been done by any other means. The author thinks that sufficiently good results have been obtained to justify the recommendation of the use of the Röntgen ray early to such patients. He is also of the opinion that the results have shown that the Röntgen ray can affect deep seated disease without destroying the superficial tissues.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

February 8, 1906.

1. The Problem of Psychiatry in the Functional Psychoses (*Continued*), By EDWARD COWLES.
2. Vaginapexy, By W. P. GRAVES.
3. Contractile Processes in the Lungs as a Result of Phthisis, with Reference Especially to Their Production of Permanent Dextrocardia, By HENRY P. DUNHAM.
4. A Case of Inverted Uterus, By C. H. HARE.
5. A Case of Extrauterine Pregnancy, By JOHN B. SWIFT.
6. An Indirect Advantage of the Routine Application of Chemical Pathology to Diagnosis, By LOUIS FAUGERES BISHOP.

2. **Vaginapexy.**—Graves remarks that vaginapexy has been done nineteen times at the Free Hospital for Women and at Dr. Baker's Private Hospital at Boston. Of these Dr. Baker performed eight, Dr. Pease one, and Dr. Graves ten operations. Vaginapexy, a name given to the operation by Dr. W. H. Baker, de-

notes as the name implies, an operation for stitching the vagina to the abdominal wall and is used in cases of extreme vaginal relaxation, such as prolapse, incomplete and complete procidentia, and advanced cystocele. The idea, although independently worked out by Dr. Baker, cannot be claimed as a new procedure, for it has been suggested, and, to some extent used, since 1893, and during the past year employed with success by Dr. Polk, of New York. The two operations have differed in several features in the process of their parallel development. The amputation of the cervix, or hysterectomy, if deemed advisable, is performed first; the patient is then put in the Trendelenburg position and the operation of vaginapexy is done. This completes the first step of the treatment and the patient should be allowed to recover completely from these two operations. She is then allowed to be up and about on her feet for several days. At the end of this time it can be seen how completely the vagina is held up and how much slack is to be removed in the plastic operation now necessary. The patient is again etherized and placed in the perineal position. An extensive Emmet's perinæorrhaphy is then performed, where the denuded lateral sulci are carried well up toward the cervix and high up on the lateral walls so that when the lateral stitches are tied the calibre of the vagina is very much lessened and a thick, firm, perineal support is gained. The vaginal outlet is made somewhat smaller than in the ordinary operation of perinæorrhaphy and the denudation of the external perinæum carried somewhat further out toward the buttock in order to give added strength and thickness to the perinæum. The results have been satisfactory, in only six cases has there been a recurrence.

3. **Contractile Processes in the Lung as a Result of Phthisis, with Reference Especially to Their Production of Permanent Dextrocardia.**—Dunham states that he only has been able to collect about twenty cases of acquired dextrocardia as the result of a chronic contractile pulmonary tuberculosis. To this amount he adds two cases which he observed. From the observations of his two patients he is inclined to say that the emphysematous enlargement of the left lung was not merely a passive filling up of unoccupied thoracic space due to contractile processes on the opposite side, but to an attempt at genuine compensatory hypertrophy which would cause slight pressure upon both the heart and the opposite incapacitated lung.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

February 10, 1906.

1. Gangrene of the Gallbladder. Rupture of the Common Bile Duct, with a New Sign, By JOSEPH RANSOHOFF.
2. The Regulation of Prostitution, By HOWARD A. KELLY.
3. Amputations Below the Knee, By C. B. CLAPP.
4. The Evils of Proprietary Medicine, By JOSEPH A. PETTIT.
5. Preliminary Steps in the Investigation of Gastric Functions, By B. ONUF (ONUFROWICZ).
6. Pneumonia, By W. J. GALBRAITH.
7. The Formation of the Corpus Luteum in the Guinea Pig, By LEO LOEB.
8. A Physicochemical Theory of Fertilization, By MARTIN F. FISCHER AND WILLIAM O. OSTWALD.

1. **Gangrene of the Gallbladder. Rupture of the Common Bile Duct, with a New Sign.**—Ransohoff reports two cases of disease of the gallbladder, one of his own practice, a gangrene, and the other from the practice of Dr. J. E. Griewe of rupture of the common duct. The latter is of special interest as it showed a localized jaundice of the umbilicus. The author thinks that although a single case is not usually sufficient to warrant the assumption that something new has been observed, this feature was so marked that further observation should be paid to the localized

jaundice, as it may become of some value in diagnosing free bile in the peritoneal cavity.

2. The Regulation of Prostitution.—Kelly, speaking of prostitution asks if experience in the United States has shown that indifference toward prostitution is a failure, and experience abroad has proved that regulation is no more successful, is there any remedy for this evil in our midst, and if so, what is it? His answer is that there is a remedy, but it is of a drastic nature and acts on the whole system. It is a sense of personal responsibility which manifests itself under the form of an active, aggressive interest in right doing, by carrying on an unrelenting personal campaign against this evil, wherever and under whatever guise they may be found. He closes his article by giving a translation of Professor J. L. Chanfleury van Ijsselstein's report on the failure of regulating prostitution in France and Belgium.

3. Amputation Below the Knee.—Clapp wishes to draw the attention to the following important details in amputating a leg below the knee: 1. Be certain of sufficient flap to properly cover the end of the bone, regardless of how close this may come to the knee joint. 2. The most uniform good results are obtained by making the long anterior with short posterior flap, bringing the scar well away from the end of the stump. 3. Redundancy is always undesirable. 4. When the length of stump is at the discretion of the operator, it should be from six to nine inches below the lower border of the patella. But the flap should be considered first, the length of the stump second. 5. The fibula should always be cut one inch shorter than the tibia, and when the amputation is near the knee joint, the fibula should be disarticulated and removed. 6. The nerves should always be drawn out and cut as short as possible.

6. Pneumonia.—Galbraith narrates the history of fourteen pneumonia cases in which the treatment consisted of quinine and iron, and summarizes his observations as follows. The first attention rendered to the patient on admittance to the hospital is a warm bath, followed by a calomel or sodium phosphate purge. The initial dose of quinine is administered in from one to three hours later, provided the stomach is not disturbed. If the temperature has reached 105° or over, from 60 to 70 grains of quinine sulphate are given as initial dose. If the temperature ranges between 103° and 104°, from 40 to 50 grains are given, if a still lower temperature is found, 40 grains may be given. But this should be the smallest initial dose. These initial doses should always be followed in one hour by usually one half of the first dose. The administration of tincture of iron is commenced within three or four hours after the second dose of quinine, ranging in doses from 10 to 15 minims every two or six hours, depending on the condition of the pulse. In the event of the temperature rising to 101° or 102°, after it has reached the normal or subnormal mark, 40 to 50 grains of quinine at one dose, while the iron in 15 minim doses is to be continued every three or four hours. If the stomach should become rebellious, this may be overcome by pepsin or guaiacol. The patient should be dressed with as light weight clothing as possible, have fresh air and plenty of liquid nourishment.

7. The Formation of the Corpus Luteum in the Guinea Pig.—Loeb used sixty ovaries of thirty guinea pigs which he cut into serial sections from 6 to 127 hours after copulation. He used Zenker's fluid, paraffin, and celloidin, hæmatoxylin and eosin. The granulosa was found to be preserved and taking part in the formation of the corpus luteum. A distinct defect in the granulosa can be noticed at the place of rupture nine and eleven and one half hours after copulation, the place of rupture of the follicle is open in the first few hours. The granulosa cells remain alive. From

twelve and one half hours on, the defect in the granulosa is no longer visible, as the cells which surround the place of rupture form one continuous layer. Between twenty-two and thirty hours the place is closed by corpus luteum cells. From fifty to sixty hours the lutein cells become somewhat larger and at the fifth day typical lutein cells can be observed with well formed vesicular nuclei, the change in the character of the cells seems to coincide with the penetration of the blood vessels into the former granulosa. The rupture of the follicle seems to be accomplished by very little hæmorrhage and a small cavity remains preserved in the centre of the follicle. This cavity begins to enlarge, first slowly, later faster; at forty-nine and one half hours the cavity is large, new liquor folliculi is formed and connective tissue becomes visible in the peripheral parts. At one hundred and one half hours this central cavity is entirely filled by connective tissue containing capillaries. This connective tissue grows along the border line of the cavity in a concentric direction. Soon after the rupture of the follicle the boundary line between granulosa and the theca interna forms folds. The theca interna becomes hyperæmic, the hyperæmia going later over to the theca externa. The size of the corpus luteum begins to increase and at one hundred and one half hours the central connective tissue occupies a relatively small area as compared to the lutein tissue proper.

MEDICAL RECORD

February 10, 1906.

1. A New Method of Testing the Functions of the Digestive Apparatus, By MAX EINHORN.
2. What is the Climacterium? By SAMUEL WYLISS BANDLER.
3. Pneumonia, By H. P. WEAVER.
4. The Modern Conception of Matter, By WILLIAM DODGE HORNE.
5. A Case of Tympanic and Mastoid Cholesteatoma; Extradural Abscess; Sinus Thrombosis; Prolonged Pyæmic Temperature Without Metastases; Recovery, By DONALD M. BARSTOW.
6. Some Notes on the Cerebrospinal Fluid, By N. A. PASHAYAN.
7. Surgical Rings, By H. A. SHAW.

1. A New Method of Testing the Functions of the Digestive Apparatus.—Einhorn attached solid food stuffs to glass or porcelain beads and drew them through the opening of the bead by tying them on with a silk thread. To test the activity of the bowels he had these beads swallowed and pass them through the stomach and bowel in order to see finally what remained attached to the bead. To test the work of the stomach only, the beads with the food attached were tied to a long silk thread, placed in a gelatin capsule and swallowed, the thread was held between the lips. At the end of four to six hours the beads were withdrawn. An entirely digestible substance will disappear, whereas indigestible substances will be found in the fæces attached to the bead. He tried his experiment first on apparently healthy persons. He found that both catgut and fish bones were digested in the stomach, and muscle fibre and chicken skin disappeared in the intestines, tendons, however, remained undigested. Raw potato sometimes disappeared, sometimes were found in the fæces, boiled potato was digested, but not the skin of potato, either raw or boiled. Fats with a very high melting point were not absorbed, suet and mutton fat were digested in the bowel. The behavior of the substances enumerated in normal digestion being known he then tried the digestion in disease.

3. Pneumonia.—Weaver states that pneumonia is increasing in prevalence and fatality. Our treatment is as unavailing as it was fifty years ago, because until lately the cause was unknown and the symptoms consequently were misinterpreted, and because our treatment has been empirical and unscientific. If

measures of prevention were more generally taught and adopted, the prevalence of pneumonia would be greatly reduced in a short while. The medical profession should know and the people must be taught how to prevent pneumonia which is infectious and can be communicated from one person to another. Proper care should therefore be given to the sputum of such patients, and should be immediately destroyed. The mouth and teeth should be thoroughly and often cleansed with an antiseptic wash. All the excretions should be as sedulously disinfected and destroyed as in cases of typhoid fever. After recovery or death the room should be as thoroughly disinfected by fumigations with formaldehyde as in cases of all other contagious diseases.

5. A Case of Tympanic and Mastoid Cholesteatoma.—Barstow reports the case of a boy on whom he performed an operation. The entire mastoid apophysis was softened and destroyed, the antrum attic and adjacent region were full of cholesteatomatous matter. The subjacent dura was covered with dark colored, flabby granulations. The patient remained in the hospital little more than eight weeks, during seven of which he had pyæmic temperature with thirty-nine chills, the highest temperature in the axilla being 107.8°, the lowest in the mouth 96°.

6. Some Notes on Cerebrospinal Fluid.—Pashayan remarks that special diagnostic value has been accredited to the cerebrospinal fluid in general paresis and tabes. With the object of inquiries into the constancy of this sign and also with its occurrence in other mental affections, the author selected a number of patients and made a cytological examination of the spinal fluid. He had at his disposal ninety-seven patients. Of twenty-seven cases of general paresis a marked increase of lymphocytes was seen in sixteen, moderate in five, doubtful in three, and negative in three. Lymphocytosis was absent in twenty-four cases of major epilepsy, two cases of infantile cerebral palsy with epilepsy, two cases of imbecility, thirteen of hebephrenia, eight of katatonia, seven of manic depressive insanity, seven of chronic alcoholic deterioration and in seven cases of paranoiac states. Six of these patients gave a history of having had syphilis and in five of them corroborative physical signs were still present.

BRITISH MEDICAL JOURNAL.

January 27, 1906.

1. Carcinoma and Its Spread Into the Lymphatics, By C. B. LOCKWOOD.
2. Remarks on Swellings of the Breast, Their Diagnosis and Treatment, By A. CLARK.
3. Enucleation of the Prostate for Hæmorrhage, By Sir W. THOMSON.
4. On Ventrifixation: With Details of a Complicated Case, By Sir W. J. SINCLAIR.
5. The Immediate and Remote Results of the High Operation for Varicocele, with a Report on the Examination of One Hundred Cases. By E. M. CORNER and C. A. R. NITCH.
6. A Case of Secondary Carcinomatous Growths Simulating Tuberculous Hipjoint Disease and Miliary Tuberculosis, By R. E. LORD and C. W. BUCKLEY.
7. Simultaneous Excision of Two Thirds of the Stomach, of the Anterior Face of the Pancreas, and the Transverse Colon, for Carcinoma, By C. P. CHILDE.
8. The Accurate Delineation of Tuberculous Foci in Early Disease of the Kidney in Women Before Operation is Undertaken, By H. FENWICK.

1. Lymphatic Spread of Cancer.—Lockwood states that the spread of carcinoma of the breast along the lymphatics is an erratic and complicated process. In cancer of the breast, as in cancer of the tongue or of the pharynx, there is hardly any interval of time between the onset of the growth and its spread into the neighboring lymphatics. The first and most obvious

effect is enlargement of the lymphatic glands; but such enlarged glands often fail to show any microscopical evidence of cancer. A cancer is a sort of ductless gland opening freely into the lymphatic system, the later acting as an outlet. That that which enters the circulation through the lymphatics is very harmful, is suggested by the marked accession of health and vigor which often follows the removal of the tumor and of the cancerous glands. It is probable that cancer may cross in the lymphatic channels from one breast to the other, but it is rash to assume so in any particular instance of bilateral tumor. Enlarged glands are not commonly met with superficially to the costocoracoid membrane, but they may be met with in rather unexpected places. After a time cancer of the breast spreads into the glands of the neck—usually a late step in the disease. Some surgeons consider involvement of the cervical glands as of fatal omen, and refrain from operating. But the dissection of the posterior triangle of the neck is not a very formidable operation, and the process of repair is rapid and attended with little pain or constitutional disturbance. Sometimes, too, these immovable glands above the clavicle are not so fixed as they seem to be.

2. Swellings of the Breast.—Clark discusses the diagnosis and treatment of swellings of the breast, as follows: 1. Neuralgia. This is rarely met with except in neurotic young women, who think they have a lump in the breast. General treatment and assurance that the disease is not cancer, are all that is required. 2. Mastitis. The acute variety is easily diagnosed by the general febrile symptoms. It is puerperal, but may occur during the course of mumps, or during puberty. Chronic mastitis is a much more difficult condition to differentiate from cancer. An exploratory incision may be necessary for diagnosis. 3. Abscess. This, when acute, presents no difficulty in diagnosis. Chronic localized abscess may however simulate cancer exactly, and require an incision under an anæsthetic. 4. Adenoma and Fibroadenoma. The former is composed of pure breast tissue, the latter is a mixture of breast and fibrous tissue. 5. Cysts. These are common causes of enlargement of the breast. (a) The galactoceles or milk cyst occurs chiefly in nursing women and is a retention cyst. A sore nipple is the commonest cause. It is about the size of a walnut, is movable, round in shape, situated near the nipple, and single. It may disappear entirely only to reappear again later. After incision drainage is all that is required. (b) Involvement cysts, occurring about the climacteric period, due to duct obstruction. They contain a clear serous, or glairy reddish brown fluid. They are usually deeper in the breast than milk cysts, and vary more widely in size. 6. Malignant Disease. There are two varieties: (a) Acinous or glandular cancer, and duct cancer. The terms scirrhus and encephaloid are no longer used by pathologists.

5. Varicocele.—Corner and Nitch have followed up one hundred cases in which the operation for varicocele was performed, in order to ascertain the immediate and remote results. The operation consisted in exposing the cord, and removing about two inches of the pampiniform plexus. A. Immediate results. 1. Hæmorrhage. This is a rare complication, but even a slight hæmorrhage may lead to the formation of a hæmatoma: this, by pressure on the veins, may produce œdema and thickening of the scrotum, subjacent tissues, and testis. The warning, if hæmorrhage is occurring after an operation for varicocele, is that the patient complains of pain. The scrotum should always be examined if this complaint is made. 2. Orchitis. Inflammatory changes in the testis were noted in 5.6 per cent. In no case was there any suppuration. 3. Œdema and thickening of the scrotum, enlargement of the testis, and hydrocele. Alteration in consistence of

the above tissues is to be noted in all cases, and a flaccid hydrocele is frequently present. 4. Suppuration. This is a very rare complication and has nothing to do with the causation of the above mentioned thickening. B. Remote results. 1. The testis. Changes in the consistence of this gland are constantly present. The gland is harder than its fellow, and less elastic: such fibrosis could be recognized in 84 per cent. of the cases, and this figure is too low. 2. The epididymis. This is usually larger, harder, and more easily felt. 3. Skin of scrotum. This was noticeably thickened in 41 per cent. In 50 per cent. the scrotum was thicker on the side of the operation. 4. Hydrocele. Large tense hydroceles, noticed by the patients, were present in 8 per cent. Small flaccid unnoticed hydroceles were present in 15 per cent. 5. Spermatocoele, hernia, and recurrence each occurred in two cases (2 per cent.). 6. Thickening of vas, sensation, and general results. The vas deferens was thickened in 8 per cent. In 17 per cent. there was complaint of pain in the testis. Seventy per cent. of the patients were definitely benefited by the operation, 26 were neither helped nor harmed, while 4 stated that they were worse for the operation.

LANCET.

January 27, 1906.

1. The "Acute Abdomen."—Lecture I, By W. H. BATTLE.
2. The Institution and Sanatorium Treatment of Pulmonary Tuberculosis in Relation to Large Centres of Population, By E. F. TREVELYAN.
3. Remarks on the Evolution of Operative Gynaecology, By D. L. ROBERTS.
4. An Experimental Investigation of the Budde Process for the Preservation of Milk, By R. T. HEWLETT.
5. Two Cases of Leucæmia Treated by the Röntgen Rays, By W. I. BRUCE.
6. "Interrupted Circulation" as a Therapeutical Agent, with Illustrative Cases of Rheumatoid Arthritis, By W. EWART.
7. Some Experiments in Hypnosis, By E. ASH.
8. The Acid Extract of the Duodenal Mucous Membrane as a Remedy in Diabetes Mellitus, By J. H. ABRAM.
9. A New and Easy Method of Triple Staining for Cystological and Histological Purposes, By V. BONNEY.
10. The Importance of a Strictly Limited Lactation, By A. D. FORDYCE.
11. The Nose in Literature, By P. T. HALD.

1. The "Acute Abdomen."—Battle, in the first of three lectures on the subject, discusses the symptoms of acute abdominal disease. The color will vary very much from that of health to the dusky flush of embarrassed respiration; the expression from placid indifference to mortal agony. Sunken eyes with dark circles round them, a pinched face, and an anxious expression, are very ominous. If the nostrils work rapidly the pulse is going too fast. The pulse rate is a very important indication as to whether the case may be safely left, it is advisable to operate, or the patient is too far gone for relief. Any abdominal case with a pulse rate over 100 should be carefully watched: if it rises above this the patient will probably require surgical aid. The temperature is often misleading. A low or subnormal temperature and a rapid pulse is a very bad combination. Vomiting should cease after the onset and its continuance is a bad sign. The effortless pumping up of large quantities of greenish fluid should cause much concern. Restlessness is an unfavorable symptom; so, indeed, is a condition of manifest indifference and apathy. The marks of recent applications for relief of pain will usually give some idea of its severity. Thirty seven per cent. of acute abdominal cases are made up of appendicitis and its complications: intestinal obstruction comes next (twenty four per cent.), then intussusception (sixteen per cent.), perforations of the alimentary tract (eleven per cent.), gynaecological cases (six per cent.), and

abdominal abscesses (three per cent.). What remains constitutes about three per cent. of the total.

4. The Budde Process of Milk Preservation.—Hewlett has investigated this process for the preservation of milk. It consists in the addition of about 15 cubic centimetres of a three per cent. solution of hydrogen peroxide to each litre of milk; the mixture is then heated to from 51° to 52° C. for at least three hours. Heating below 48° C. is not efficient, and above 55° C. induces changes in the milk. With the aid of the heating the hydrogen peroxide is completely decomposed into oxygen and water by an enzyme (catalase) present in the milk. The oxygen at the moment of liberation being in a nascent state, acts as an efficient germicide. At the end of the process the whole of the hydrogen peroxide should have been decomposed, so that no antiseptic remains, the germs are destroyed, and a small quantity of water added to the milk. The author's experiments lead him to the following conclusions: 1. All nonsporing organisms (the bacilli of tuberculosis, diphtheria, typhoid fever, dysentery, and the cholera spirillum) are destroyed by the process. 2. Sporing forms (bacillus anthracis, bacillus subtilis) are not destroyed though reduced in number. 3. "Buddeising" natural milk reduces the number of microorganisms far more than heating alone. 4. "Buddeised" milk is practically indistinguishable from untreated milk in taste, odor, appearance, and in the rising of the cream. No increase in acidity is caused by the treatment. 5. Such milk will keep perfectly sweet and apparently unaltered in odor, taste, and appearance for at least eight to ten days in summer and much longer in winter. 6. In milk obtained in the ordinary way without special precautions the microorganisms are reduced by the Budde process over 99.9 per cent. 7. The distribution of the milk in closed bottles is a great improvement; the method excludes all possibility of the adulteration of the milk by the vender before it reaches the consumer. If such milk can be produced without raising the ordinary rates, and if its nutritive qualities are unimpaired, the process appears to have a great future before it for infant, child, and invalid feeding, and for the treatment of gastrointestinal disorders.

5. X Rays and Leucæmia.—Bruce reports two cases of leucæmia which were greatly benefited by the use of the x rays. In the first case treatment was systematic and regular, and progressive improvement was maintained. The general health was improved, the spleen was smaller, the temperature fell to normal, the number of red corpuscles was increased, and the number of leucocytes fell from 400,000 to 32,000 per cubic millimetre. The proportion of polynuclear cells rose, while that of the myelocytes fell. X ray treatments were given daily, consisting of ten minutes' exposure of the splenic area, five minutes' exposure of the sternum, and ten minutes' exposure of the knees. Arsenic was also given. In the second case, a very severe one, the beneficial effects were most noticeable as long as treatment was kept up. The leucocytes were reduced from 1,440,000 to 42,000 per cubic millimetre, and the red cells increased from 2,300,000 to 4,750,000 per cubic millimetre. The curative effect of the x rays may be another instance of their power over the growth of tumor cells. X ray dermatitis was avoided by the use of layers of linen or felt.

6. "Interrupted Circulation" as a Mode of Treatment.—Ewart reports a series of cases of subacute synovitis, deforming soft puffy nodular arthritis in women, and late massive articular thickenings by the interruption of the circulation of the limb. This was accomplished by means of an Esmarch's tourniquet or a piece of India rubber tubing wound tightly around the limb. The duration of the constriction varied from thirty seconds to five minutes, from one

to six applications being given at a sitting. In none of the cases was there any evidence of the slightest damage having been done to the skin, vessels or nerves. The results obtained were invariably satisfactory. The recent puffy swellings were rapidly amenable to a few applications. The inveterate puffy swellings were sometimes visibly affected during the application, and eventually disappeared in a short time revealing the articular deformities sharply outlined. The periarticular thickenings were slower to yield but gradually diminished.

8. Duodenal Extract in Diabetes.—Abram has treated three cases of diabetes mellitus with the acid extract of the duodenal mucous membrane, with most satisfactory results, the sugar disappearing from the urine and the general condition improving greatly. The treatment is based on the fact that the contact of hydrochloric acid (gastric juice) with the epithelial cells of the duodenum causes in them the production of a body which is absorbed by the blood stream and carried to the pancreas, there to act as specific stimulus to secretion.

10. Limitation of Lactation.—Fordyce states that while the constant reiteration of the command for maternal nursing is as imperative as it ever was, yet it is indubitable that along with this is the very important obligation of the demand for a strictly limited lactation. The reasons therefor are: 1. The concurrence of pregnancy with lactation is comparatively common. 2. Conception is rare within the first six months of lactation, and uncommon before the eighth month. 3. Where pregnancy and lactation overlap, the foetus is likely to suffer.

LYON MEDICAL.

January 14, 1906.

- Recent Advances of Biology in the Domain of Intestinal Chemistry. By L. HUGONENQ.
- Cases of Chronic Osteomyelitis of the Lower Jaw in Children. By VIGNARD and F. MOURIQUAND.

2. Chronic Osteomyelitis of the Lower Jaw in Children.—Vignard and Mouriquand report three cases of this nature. One was in a boy twelve and a half years old, one in a boy of six and a half and one in a girl of six. All recovered after removal of the sequestra.

PRESSE MEDICALE.

January 13, 1906.

- Tuberculous Lesions in a Child. By L. LORTAT-JACOB and G. VITRY.
- The Anatomical Changes After the Bloodless Reduction of Congenital Luxation of the Hip. By J. GOURDON.
- Spermatic and Diastematic Insufficiency. By P. ANTEL and P. BOUTIN.

1. Tuberculous Lesions in a Child.—Lortat-Jacob and Vitry report the case of a child three months old which died of defective nutrition induced by a prolonged diarrhoea. At the autopsy an induration was found in the upper lobe of the right lung, which on section revealed a cavity as large as a pea, one and a half centimetres from the apex, filled with caseous pus and surrounded by infiltrated tuberculous tissue, all apparently of recent date. The intertracheobronchial lymphatic glands were enlarged, and one of them in the posterior mediastinum was as large as a bean and intimately attached to the right pneumogastric nerve. The spleen was large and tuberculous and there were many caseous glands in the mesentery. There were no changes in the intestine or meninges.

2. The Anatomical Changes after the Bloodless Reduction of Congenital Luxation of the Hip.—Gourdon describes with sketches drawn from radiographs the modifications which take place anatomically about the hip joint after such a reduction has been made.

January 17, 1906.

- Surgical Treatment of Subclavian Aneurysm. By M. SAVARIAUD.

- Pathogeny and Treatment of Arthritic Migraine.

By P. HARTENBERG.

- The Treatment of Varicose Ulcers by Incisions About the Leg. By P. HARDOUN and LA PIPE.
- The Hæmoptyses of Tuberculosis and Their Treatment with Amyl Nitrate. By R. ROMME.

1. Surgical Treatment of Subclavian Aneurysm.—Savariaud reports a case in which through a long incision over and parallel to the clavicle he laid bare and ligated the vessels and through another incision branching from the first extirpated the aneurysm.

2. Pathogeny and Treatment of Arthritic Migraine.—Hartenberg considers that arthritic migraine is due to an irritation of the cervical sympathetic induced by a rheumatismal infiltration of the tissues of the neck, particularly of the muscles. The treatment he recommends consists of the application of galvanism to the neck, the administration of salicylate of soda and the improvement of the general nutrition.

3. Treatment of Varicose Ulcers by Incisions about the Leg.—Hardouin and La Pipe report three cases successfully treated by them in accordance with Morel's method. This operation consists of three steps, an incision around the leg four centimetres above the ulcer down to the aponeurosis, which is denuded for several centimetres, a second similar incision one centimetre above the malleoli with care not to injure the anterior and posterior tibial vessels, and the application of the skin grafts to the ulcerated surface.

4. Hæmoptyses of Tuberculosis and Their Treatment with Amyl Nitrate.—Romme discusses the remark of Daremberg that the tuberculous patients who have the better chances are those in whom the disease begins with a hæmoptysis and then calls attention to the value of amyl nitrate as a pulmonary hæmostatic agent and the use of inhalations of that drug to check hæmoptyses as suggested by Dr. Hare of this country.

SEMAINE MEDICALE.

January 7, 1906.

The Systolic Murmur of Pure Aortic Insufficiency.

By Prof. MIGUEL COUTO.

The Systolic Murmur of Pure Aortic Insufficiency.—Couto states that the auscultatory characteristic of pure aortic insufficiency is the presence of two murmurs, one protosystolic, the other diastolic. The organic cause of the first is the same as that which produces faulty closure of the semiluna valves during diastole, and the murmur itself is produced by regurgitation from the aorta through the valve into the ventricle during the first or occlusive stage of the systole. When aortic insufficiency and stenosis are combined a harsh systolic murmur intervenes between the other two.

GAZZETTA DEGLI OSPIDALI E DELLE CLINICHE.

January 14, 1906.

- The Mortality From Tuberculosis in Italy During the Years 1897 to 1902. By C. FORSA.
- A Case of Leptothricosis of the Intestine. By A. P. ...
- A Case of Intestinal Obstruction. By C. FERLITO.
- The Technique of the X Rays. By V. MARAGGLINO.

1. Mortality from Tuberculosis in Italy.—Forsa reports the results of his statistical studies on tuberculosis in Italy, the principal figures being as follows: The mortality from tuberculosis in Italy has steadily diminished from 2.115 (in 1887) down to 1.585 (1902) per million inhabitants. In the year 1902, the mortality from tuberculosis occupied the seventh place among all the causes of death, in the order of frequency. In the same year 52,032 persons died of tuberculosis in a total of 32,831,644 inhabitants. The greatest number of deaths from tuberculosis occurs in the spring and in the summer, and the smallest in the winter and in the fall. The most frequent types are pul-

monary tuberculosis, tuberculosis of the mesenteric glands, and intestinal tuberculosis. Tuberculosis in Italy is more frequent in women than in men, and is most frequent between the ages of 20 and 39 years, and least frequent between 60 and 80 years. The mortality is smallest in the smallest communities, and greatest in proportion to the population in the large cities. The remarkable diminution of the general mortality, from 27.99 per thousand (in 1887) to 22.15 per thousand (in 1902), is due solely to the enforcement of the new sanitary laws. This difference means a saving of 530 lives annually in each million inhabitants, and among the means which have contributed towards this end may be mentioned the free supply of food to poor children and the proper feeding of the pupils of kindergartens and nurseries. Far more satisfactory results may be expected from a more direct and more vigorous campaign against tuberculosis.

January 21, 1906.

1. Labiomaxilla Palatine Fissure, By SILVIO ROLANDO.
2. A Case of Voluminous Femoral Hernia, By I. BRUCHI.
3. Tracheotomy of Intubation, By M. FASANO.
4. On Putrefactive Pseudodigestion, By C. FERRAL.
5. Aspirin in the Treatment of Chorea, By R. MASSALONGO and G. ZAMBELLI.

1. **Cases of Labiomaxilla Palatine Fissure.**—Rolando reports a case of bilateral fissure including the lip, upper maxilla, and palate, in which the intermaxillary portion was prominent. A plastic operation was performed with an excellent result, as shown in the illustration.

2. **Large Femoral Hernia in a Male Subject.**—Bruchi's case is interesting because of the large size of the hernia and its occurrence in a male subject. The hernia contained only loops of intestine, which were completely reducible. As a rule, large femoral hernias are irreducible, and contain omental tissue. The sac had also undergone cystic degeneration. The femoral hernia had appeared after an operation for inguinal hernia, and it is possible that the traction exercised upon the ligament of Fallopius in the reconstruction of the posterior wall of the inguinal canal had weakened the crural ring situated beneath it. Tricomi's method was used in effecting a radical closure of the hernial orifice.

3. **Tracheotomy, or Intubation.**—Fasano discusses the relative merits of these two procedures. [It may be remembered that intubation is almost universally favored in the United States, whilst in Europe and other places abroad, tracheotomy stills holds its own.] Fasano, however, is a strong advocate of intubation. In a large series of cases and experiments, he reports excellent results from intubation, and finds that this measure has every advantage over tracheotomy, while if intubation fails, the more radical procedure can still be resorted to.

RIFORMA MEDICA.

January 20, 1906.

1. On Pulmonary Tuberculosis; Second Lecture, By A. MURRI.
2. A Case of Primary Sarcoma of the Liver, Accompanied by Symptomatic Pruritus, By E. SALVINI.
3. Further Data on the Phenomenon of Cardarelli Oliver and the Signs of the Adhesion of an Aortic Aneurysm to the Air Passages, By S. PANSINI.

1. **Pulmonary Tuberculosis.**—In this second lecture (the first was abstracted in this column in a preceding issue), Professor Murri, of Bologna, discusses the treatment of pulmonary tuberculosis. Some of the points in his discourse are as follows: The indirect treatment of tuberculosis is far more effective than the direct. As regards the curability of the disease, we should not promise too much, but it is not at all absolutely necessary to send patients to sanatoria; for many are cured as permanently as can be done without leaving their homes. The great merit of the sanatoria is

that they have dissipated certain prejudices in both physicians and patients. Thus, it is no longer believed that fresh air should be avoided and the windows kept closed, so that the patient may not get bronchitis. Much greater facilities should be provided in the public hospitals in the larger cities for the special treatment of tuberculous patients. Dispensary service should also be arranged for the tuberculous poor. The family physician, especially the country physician, has a great mission to perform towards his tuberculous patients. Almost every day he is called upon to visit patient whose rooms are littered with bottles of wine or brandy, of medicinal mixtures and with boxes of pills and powders. The windows are closed, the doors protected by curtains, and yet good food and pure air are far more valuable remedies than all those costly products so widely advertised. Another danger lies in the apparently brilliant results of the laboratory. Remember the disappointment following the proclamation of Koch. It is not sufficient that Behring has isolated a curative substance in the test tube. As yet we have not the needful proof of clinical results.

2. **Case of Primary Sarcoma of the Liver Accompanied by Symptomatic Pruritus.**—Salvini reports the case of a man, aged sixty-seven, with a primary sarcoma of the liver. Three months before admission the patient was seized with a pain in the region of the liver which was worse on pressure, and did not disappear in spite of all efforts. Three days afterwards, he was attacked with a general pruritus, which was followed by the appearance of a papular eruption. The case presented, therefore, a clinical syndrome described by Peper in his work on the primary malignant tumors of the liver, to which was added a dermatosis which the author describes as symptomatic of a profound lesion in the liver.

MEDITSINSKOYE OBOZRENIJE.

Volume LXIV, No. 20.

1. Some Considerations on Wertheim's Operation, By N. A. MICHAÏLOFF.
2. An Inexpensive Table for Gynecological and Surgical Operations, By D. KONSHIN.
3. Two Cases of Multiple Unicellular Echinococcus, By V. I. VORONKOFF.
4. Echinococcus of the Kidney and Its Diagnosis, By G. I. BARADULIN.

1. **Wertheim's Operation for Cancer of the Uterus.**—Michailoff advocates a more general adoption of Wertheim's operation for the total removal of the uterus and appendages by the abdominal route, including also the extirpation of the affected lymph-nodes, the cellular tissue and the upper portion of the vagina. The operation gives a greater mortality than ordinary hysterectomy, but cancer is such a disease that the patient may well be subjected to the extra risk in order to get a more permanent result. Doubts have also been expressed as to the possibility of removing the cellular tissue with the lymphnodes which are lodged therein. Wertheim himself does not take great pains in removing all the glands, but contents himself with removing those which are markedly enlarged. The operation takes considerable time, but it is not technically difficult, and the postoperative period is not more serious than after other laparotomies.

3. **Two Cases of Multiple Echinococcus.**—Of the two cases reported by Voronkoff the first was a case of single echinococcus in the subcutaneous cellular tissue of the right thigh, of two echinococcus cysts in the right breast, and one in the left breast. According to Alexinski, echinococcus of the mammary gland occurred in 0.87 per cent. in 1,950 cases of this disease. The appearance of the echinococcus cysts in one patient was noted after the last child birth and these cysts in the mammary gland increased in size

more rapidly than those in the subcutaneous tissue. In the second case there was multiple echinococcus infection of the peritonæum, showing small cysts scattered through the entire peritoneal cavity, the omentum, etc. A hernial sac which was found in this patient was also affected.

4. Echinococcus Cysts of the Kidney.—Baradulin reports briefly the history of a case of echinococcus of the kidney which he makes a text for the discussion of this affection. Echinococcus of the kidney is comparatively rare, and according to Davaine, of 566 cases of echinococcus, 30 showed an involvement of the kidney, while in Iceland, where the disease is frequent, Finsen found only three cases in 255 instances of echinococcus infection. Houzel collected all the cases of echinococcus of the kidney reported, and found only 115, to which the present author added 27 published since then, so that with his own case there are now 143 cases. The kidney is involved so rarely because, as a rule, the echinococcus enters the system through the alimentary canal, and in order to get to the kidney it must first enter the blood. Echinococci can also be inhaled, however, and passing along the pulmonary cavities, can enter the left ventricle and thence the general circulation. The two symptoms which can be relied upon are swelling and the finding of portions of the echinococcus in the urine. In most cases the urine is negative, and unfortunately, even the swelling may be very insignificant. The diagnosis of this condition, therefore, is in most cases impossible. Exploratory puncture of the swelling is dangerous as it is apt to give rise to hæmorrhage, to infection, or to other complications. The diagnosis can only be made by exclusion. The operative treatment is usually undertaken through a lumbar incision and either the entire kidney is removed or the cyst alone is resected. The removal of the kidney, however, is not advisable if a large amount of healthy tissue has remained.

JOURNAL OF THE ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.

February, 1906.

1. Alcohol a Depreciating Factor of Efficiency, By GEORGE A. LUNG.
2. Some Observations Concerning the Controlling of Epidemics, By EDWARD C. CARTER.
3. The Efficiency of the Enlisted Man in the Hospital Corps, with Particular Reference to the National Guard, By GEORGE M. COATES.
4. Treatment of Inguinal Adenitis, By GEORGE ROTHGANGER.
5. A Case of Peritoneal Wound, By WM. H. WILSON.
6. A Virulent Outbreak of Tuberculosis in a Gurkha Regiment, By HENRY HAMILTON.

2. Some Observations Concerning the Controlling of Epidemics.—Carter is of the opinion that measures to prevent or control epidemics should be in the hands of the National government because an organization must be ready, and material available for immediate use. The expense of an adequately equipped organization is too great properly to be undertaken by local authorities, except in rare cases of wealthy and enlightened communities. Besides, a national organization is less likely to be interfered with by local influence or interest. An epidemic can be successfully handled only by a competent person on the spot who should have absolute authority.

3. The Efficiency of the Enlisted Man in the Hospital Corps, with Particular Reference to the National Guard.—Coates concludes his observations by saying: 1. That the efficiency of the hospital corps private some years ago was far from satisfactory. 2. That under new methods of organization, training and selection the efficiency can be still further greatly increased. 3. That the medical student or practitioner, so far as the Na-

tional Guard is concerned, makes a male army nurse vastly superior to the ordinary layman. 4. That the keeping of the hospital corps as a distinct unit, separate from the rest of the regiment both in armory and in camp, greatly increases its efficiency and maintains better discipline. 5. That in the organization of the medical department of Pennsylvania the hospital corps company of the regular army has been approximated as closely as may be under existing conditions; but that in his ability to obtain trained men the National Guard surgeon has an especial advantage and ought to secure even better results from a scientific standpoint and equal precision in drill and equally good discipline.

AMERICAN JOURNAL OF OBSTETRICS

January, 1906.

1. Metrorrhagia Myopathica, By B. M. ANSPACH.
2. A Clinical Study of the Complications Arising in Sixty-three Consecutive Cases of Ovarian Tumors, with Special Reference to Malignancy, By C. C. NORRIS.
3. Injuries to the Child Inflicted at Birth, By J. C. HOAG.
4. Pregnancy Associated with Diabetes, By M. A. TATE.
5. Myomectomy, By W. P. MANTON.
6. Aseptic Midwifery, By F. VAN HORN.
7. Physiology of Temperature, with Special Reference to that of the Puerperium.

1. Metrorrhagia Myopathica.—Anspach offers the following conclusions: 1. This condition stands for cases which have heretofore been denominated apoplexy of the uterus, senile endometritis, and preclimacteric hæmorrhage. 2. It is a symptom which is immediately dependent upon a lesion of the uterine muscle, to be found in the future in the elastic tissue of the vessel walls and the subserous and supra vascular layers. 3. The physiological lesion is probably an insufficient contractile power of the uterus. 4. The uterus is enlarged and softened, and the os patulous. 5. It does not occur in nulliparæ and is probably related to the child bearing process. 6. The diagnosis is justified only when other causes of uterine hæmorrhage have been excluded. 7. Apoplexy of the uterus, senile endometritis, and preclimacteric bleeding are incorrect and unscientific terms for this condition. 8. Curettage, atmocausis, etc., have given unsatisfactory results, but palliative measures should precede hysterectomy.

2. Complications of Ovarian Tumors with Special Reference to Malignancy.—Norris summarizes his paper in the following propositions: 1. One in every four to six ovarian tumors is malignant, and this proportion warrants that all ovarian tumors be regarded as malignant until the contrary is proven. 2. The operative mortality in such malignant disease should not be more than 10 or 12 per cent. The cures at the end of five years will be few, carcinoma being the most frequent and dangerous of malignant diseases of the ovary. 3. Every ovarian tumor should be operated upon as soon as discovered, if possible. 4. "Borderline" should be operated upon; there may be clinical evidences of malignancy and the tumor prove benign, or the reverse. 5. Exploratory operations will often give comfort by removing the pressure made by ascitic fluid, and should always be performed in cases in which the diagnosis is in doubt. 6. All specimens should be examined rigorously and extensively by the microscope. 7. Parovarian are less likely to be malignant than ovarian cysts. 8. Torsion is next in frequency to malignancy as a complication.

3. Injuries to the Child Inflicted at Birth.—Hoag thinks this department of pathology has been too little studied. In his article he has followed the writings of Küstner upon this subject. Injuries of the head may be produced by the forceps, by anatomical defects in the foetal head or the maternal pelvis, or by too prolonged stay of the head within the pelvis. This class would include abrasions of the skin, caput suc-

cedaneum, cephalhæmatomata, depressions of cranial bones, cranial fractures and separation of cranial sutures, rupture of intracranial vessels, and various injuries about the face. Other injuries which are important are those which involve the neck, the vertebrae, the secundines, fractures and dislocations of various bones, especially the extremities, and paralyses of various character and severity from injury to nerves.

4. **Pregnancy Associated with Diabetes.**—Tate quotes Matthews Duncan's propositions, that: 1. Diabetes may occur during pregnancy, although it may be absent from a given individual at other times. 2. It may cease with the termination of pregnancy. 3. It may come on soon after parturition. 4. It may not return in a subsequent pregnancy. 5. Pregnancy and parturition may be unaffected by it. 6. Pregnancy is liable to be interrupted while the foetus almost always dies. Of the 23 cases collected by the author 12 recovered and 11 died. Premature labor should be induced in most of the cases.

5. **Myomectomy.**—Manton has the following conclusions: 1. The sacrifice of the uterus in many of the cases of single and multiple fibroids is to be deprecated, and the influence of surgery should be directed toward its discontinuance. 2. Myomectomy will relieve many of these cases, save the uterus, put its tissues in the way of renewed health, and restore functional activity. 3. The dangers of this operation, hæmorrhage and sepsis, have been practically removed, and in suitable cases almost any number of tumors may be enucleated with satisfactory results. 4. In deciding upon this operation chief consideration should be given to the age and physical condition of the patient, the arrangement and distribution of the tumors, and the volume of uterine tissue.

GLASGOW MEDICAL JOURNAL.

January, 1906.

1. The Treatment of Purulent Otitis Media and its Complications, By J. G. CONNAL.
2. Gummatous Synovitis of Many Joints Closely Simulating Rheumatoid Arthritis in a Congenitally Syphilitic Child, By J. W. FINDLAY and J. R. RIDDELL.
3. Case of Chronic Inversion of the Uterus Resulting from Carcinoma, By J. N. STARK.
4. Case of Acute Exudative Choroiditis, Complete Amaurosis of Two Weeks' Duration; Iodopin by Injection. Recovery, By T. FORREST.
5. Sleeping Sickness in Uganda, By E. D. W. GREIG.

1. **The Treatment of Purulent Otitis Media and Its Complications.**—Connal shows the insidiousness and the great dangers near and remote of this disease. He refers to its frequency and the fact that it has often been overlooked as a matter of no particular importance. Many cases were formerly fatal which are now cured by surgical measures. The nasopharynx is in most cases the source of the ear disease. Its manifestation may consist in purulent conditions of the nose or nasopharynx, hypertrophied tonsils, or nasal malformations. The middle ear discharge very often disappears as one or another of these causative conditions is removed. The intracranial complications are of the greatest importance. When their suggestive symptoms appear the mastoid should at once be opened and the investigation carried as far as the circumstances will warrant. The possibility of overlooking typhoid fever in this connection is noted. It may be necessary to invade the brain in the search for the source of the mischief.

3. **Chronic Inversion of the Uterus.**—Stark thinks that this condition is most frequently caused by a submucous fibroid attached to the uterine fundus. Its chief danger is from hæmorrhage which is sometimes uncontrollable. The danger of the situation is intensified if a myoma or a malignant tumor is present; hence the necessity for a correct differential diagnosis

at the beginning. The presence of a malignant like the one reported is extremely unusual.

5. **Sleeping Sickness in Uganda.**—Greig divides this disease clinically into two phases, viz.: 1. The phase of glandular enlargement alone; and, 2, the phase of glandular enlargement plus symptoms due to involvement of the nervous system. The first phase may last two or three years and is known as trypanosoma or Gambia fever. This passes, in time, into the second phase which is the sleeping sickness proper. There is at first dulling of the facial expression, slowness of speech, tremor of the tongue, lips, and hands, and more or less ataxia. The symptoms become more pronounced and in a year the patient is bed ridden. The temperature becomes subnormal, there is incontinence as to rectum and bladder, constant lethargy, and death. The disease is common to white and black alike, and no age nor either sex is exempt when exposed to its infectious elements which are transmitted by flies.

JOURNAL OF THE ROYAL ARMY MEDICAL CORPS.

January, 1906.

1. Mediterranean Fever in South Africa, By C. BIRT.
2. The Working Efficiency of Some Disinfectants, By E. E. P. FOWLER.
3. Suggestions for the Prevention and Treatment of Venereal Disease in the Army, By E. BUTT.
4. Notes on the Health of Europeans and Natives in Peking, By F. E. GUNTER.
5. Notes on Some Preparations for Producing Local Analgesia, By T. W. H. HOUGHTON.
6. The Prevalence of Mediterranean Fever in Port Said, By H. ROSS.
7. A Plea for the More Systematic Microscopical Examination of the Blood, By T. C. MORGAN.

1. **Mediterranean Fever in South Africa.**—Birt comes to the conclusion, from observations made, that Mediterranean fever is now endemic in certain parts of the Orange River Colony, and that its further invasion is to be apprehended. The agent in the causation of any doubtful fever should be carefully looked for by drawing off with a sterile antitoxine syringe some ten to twenty c.c. of blood from a vein at the bend of the elbow, and making cultures from the blood. If this is not feasible, serum reactions, properly controlled, should be undertaken.

6. **The Prevalence of Mediterranean Fever in Port Said.**—Ross states that it may be regarded as probable that Mediterranean fever was not endemic in Port Said up to the year 1898. Early in 1899 a small epidemic occurred. Since that time the number of cases has gradually increased. From his observation mosquitoes again seem to be the carriers of this disease.

THE JOURNAL OF OBSTETRICS AND GYNÆCOLOGY OF THE BRITISH EMPIRE.

January, 1906.

1. Ventral Fixation of the Uterus and Its Alternatives, By G. ERNEST HERMAN.
2. Withdrawal of the Liquor Amnii: A Cause of Foetal Drafts and Placental Changes, By B. T. WATSON.
3. A Case of Malignant Teratoma of the Ovary, By LEONARD S. DUNGEON.
4. Some Points in the Causation of Pelvic Suppuration, By G. ROTHWELL ADAM.
5. Two Cases of Primary Carcinoma of the Female Urethra, By FLORENCE V. BOYD.

1. **Ventral Fixation of the Uterus and its Alternatives.**—Herman thinks that ventral fixation of the uterus is the best mode of relieving symptoms caused by retroversion or retroflexion of the uterus, when the result of the mechanical support is not satisfactory. Combined with elytrorrhaphy but not without it, ventral fixation, is an efficient treatment of prolapse. If the operation is properly performed subsequent difficulty in labor need not be feared.

2. **Withdrawal of Liquor Amnii.**—Watson remarks that as a result of the withdrawal of liquor amnii the

fœtus at once dies, death being due to the arrest of the vitelline and allantoic circulations. The dead fœtus thus with its placenta are retained in the uterus. The dead fœtus slowly degenerates, the mesoderm becoming invaded by fibrin and the cells of the ectoderm undergoing a granular disintegration, while the placenta becomes detached only when the tissue forming the zone of separation has become sufficiently attenuated, and it does so in the same manner as the normal placenta. With the death of the fœtus the secretion of the liquor amnii ceases.

Letters to the Editors.

THE EGG IDIOSYNCRASY.

1126 NORTH CALVERT STREET,
BALTIMORE, February 9, 1906.

To the Editors: The question of "the egg idiosyncrasy" has long interested me for the reason that I find but few women during their active physiological lives can eat eggs or drink milk. As a boy I had this fact impressed upon me when I lived in a family with four women, not one of whom could eat an egg without being nauseated or see one out of its shell without having a feeling of disgust. The proper significance of the replies: "Oh, Doctor, I can't eat eggs" and "I can't bear milk" has evidently slipped our usual observation of details, but if every practitioner will carefully note how many of his young women patients will absolutely refuse to eat eggs or drink milk, he will come to the conclusion that there is something more than "idiosyncrasy" in this repugnance to albumin in these natural foods. This refusal to eat and disgust for eggs is especially marked at the menstrual period. As I am interested in this subject I shall be pleased to receive data from the profession.

WILLIAM LEE HOWARD.

Proceedings of Societies.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Section B.

Fifty-fifth Annual Meeting, held in Scranton, September 26, 27, and 28, 1905.

The Second Vice-president, Dr. WALTER S. STEWART, of Wilkes-Barre, in the Chair.

(Concluded from page 113.)

The Address in Obstetrics was read by Dr. ELA B. EVERITT, of Philadelphia, who took for her subject What Constitutes Operability in Cancer of the Uterus? She stated that the best results would be accomplished in three ways: 1. By bringing about conditions favorable to earlier diagnosis. 2. By improvement in operative technique. 3. By clear and widespread knowledge of when to apply radical measures and when to be content with palliative ones. Among the factors requiring consideration under the latter heading were the proportion of the uterus involved; the degree of extension beyond the uterus, and the operative measures available. She commented on the various operations performed, and stated that the question of prime importance in each case was as to what was the best for the individual patient, believing that operative interference was justifiable only when a radical cure, or at least a prolongation of life under more favorable circumstances, could fairly be expected.

Ectopic Gestation was the title of a paper read by Dr. CHARLES P. NOBLE, of Philadelphia, who stated that during the past sixteen years he had operated in ninety-one cases, in 89 by abdominal section and in four by

vaginal incision, two of the latter subsequently requiring abdominal section. In forty-four of these cases the sac was in the left tube, in forty in the right, in seven the report did not show which, and the other tube was involved in twenty. In his experience the causes were usually mechanical, due either to infection or congenital defects of the tube, etc. Cases without rupture were seldom accompanied by positive syncope, and the ideal time for the operation, which should consist of the removal of the involved tube, with or without the ovary, was before rupture took place. He urged early diagnosis and prompt operative interference, believing that a careful consideration of the history would greatly facilitate the diagnosis.

Dr. GEORGE D. NUTT, of Williamsport, stated that in his experience the trouble had most frequently been due to mechanical factors, and he believed that it was much more frequent than had been supposed before abdominal surgery came into prominence. He reported two cases of rupture occurring in the broad ligament, and a case illustrative of the efforts made by Nature toward repair.

Dr. RICHARD H. GIBBONS, of New York, reported several cases.

Dr. J. C. O'DAY, of Oil City, urged the necessity for the more prompt and early recognition of these cases by the general practitioner, and pointed out as strong diagnostic symptoms a long history of sterility with sudden cessation of menstrual periods and pelvic pain, which he believed to be sufficient to warrant an exploratory incision. He cited as causative factors gonorrhœa, torsion of the tubes, and other mechanical factors.

Dr. FRANKLIN F. ARNDT, of Scranton, recommended as a diagnostic aid curettage and examination of the scrapings for decidual cells.

Dr. NOBLE referred to the atypical cases, and stated that he had seen some in which the pain was in the epigastrium and the temperature above normal, even after considerable hæmorrhage had taken place. Undoubtedly spontaneous recovery did take place in a certain number of cases, but, of course, it was not within the power of the physician to tell just which these cases would be, and hence an operation should always be done, if possible, before rupture occurred. Where there was a history of a missed period, pelvic pain, and the finding of a mass, a diagnosis of extrauterine pregnancy would in 99 cases out of 100 be correct.

The Restitution to the Normal After Labor was the title of a paper read by Dr. BARTON COOKE HIRST, of Philadelphia, who stated that out of about 6,000 cases of diseases of women which had come under his observation, injuries of the genital canal and backward displacement of the uterus constituted more than one third of the whole, and if to this number were added the puerperal infections, pelvic inflammations, etc., after childbirth and abortion, subinvolution, endometritis, and the other pathological consequences of parturition, very few cases were left, except a limited number of neoplasms, genital tuberculosis, and gonorrhœa. He urged the necessity for hospitals in connection with the medical colleges in order that the practical as well as the theoretical side of the cases could be taught the student. The patient should be carefully watched during the period of gestation and at least three examinations made after childbirth, the first four or five days after the occurrence, the second just before the patient left her bed, and the third just before her discharge from the hospital.

Dr. GEORGE M. BOYD, of Philadelphia, called attention to the necessity for carefully watching over the patient during the period of pregnancy, and making sufficient examinations after childbirth to insure leaving the organs in the best possible condition. Except in cases of excessive bleeding and injury to the broad

ligaments, the cervix should not be repaired immediately, but the reverse was true in regard to injuries of the perinæum, as better results were secured from immediate repair, except when the patient was in a very exhausted condition.

Uterine Curettage.—A paper on this subject was read by Dr. E. E. MONTGOMERY, of Philadelphia.

The Significance and Management of Chronic Uterine Hemorrhage.—A paper thus entitled was read by Dr. GEORGE ERETY SHOEMAKER, of Philadelphia, in which he stated that the determination of whether the flow was abnormal must be made by a comparison of other periods of the same individual's life, and cited among the causes passive congestion of the pelvic vessels, pelvic disease outside of the uterus, prolapsed and cystic ovaries, chronic adherent inflammatory disease and disorders of pregnancy—partial placenta prævia, threatened abortion, and extrauterine pregnancy.

Dr. RICHARD H. GIBBONS, of New York, reported a case.

Dr. F. F. ARNDT, of Scranton, felt that the curette should be employed only by one skilled in its use, chiefly in septic endometritis and for obtaining scrapings in suspected malignant disease.

Dr. NOBLE emphasized the importance of educating the laity to know that hæmorrhage preceding the menopause was not natural, and called for thorough examination, which he believed would be valuable in reducing malignant disease. He called attention to the necessity for accurate diagnosis before the employment of the curette and said he believed that the physician who used this instrument to assist him in making a diagnosis would have done more for his patient if he had not employed the instrument.

Dr. GEORGE M. BOYD, of Philadelphia, deprecated the use of the curette following miscarriage and abortion, believing that the uterus could be better emptied by means of the fingers, and stated that in an experience of 15 years at the Philadelphia Lying-In Charity he had observed over 10,000 cases, and had never used the curette for this purpose.

Dr. J. M. BALDY, of Philadelphia, believed that the curette was a very valuable instrument in certain cases, but that the dilatation had better be done by means of the expansion blade forceps than by bougies, for the reason that it was necessary to make only one insertion, thus minimizing the danger of injury from this standpoint.

Dr. SHOEMAKER believed that the curette should not be used without an anæsthetic, as under these conditions it was not possible to properly sterilize the field of operation.

Neglected Incomplete Rupture of the Perinæum, and Its Cure.—A paper with this title, by Dr. J. C. DAcOSTA, of Philadelphia, was read by title.

The Technics in Laparotomies, with a View of Restricting the Employment of Drainage, was the subject of a paper read by Dr. L. J. HAMMOND, of Philadelphia.

Dr. J. CLARKE, of Philadelphia, referred to a series of 1,000 cases, which he had worked out several years ago, and stated that as the number of operations became greater the times in which drainage was employed became fewer, and he believed that it should be the exception rather than the rule to drain.

Dr. BALDY stated that the more experienced the operator became the less often he would employ drainage. It should be used only when particularly indicated, and the less the abdominal contents were handled the better.

Dr. ERNEST LAPLACE, of Philadelphia, believed that drainage should not be employed unnecessarily, but in cases where there was any doubt it was better to insert the drain.

Appendicitis—Treatment of Septic Peritonitis.—A paper with this title, by Dr. CHARLES H. OTT, of Sayre, was read by title.

The Management of Pus Cases in Abdominal Surgery was the title of a paper read by Dr. REED BURNS, of Scranton, who stated that in empyema of the gall-bladder the best results followed cholecystectomy. In cases of pyosalpinx, suppurating ovaries and tubes, ovarian abscesses, suppurating cysts, and acute salpingitis, an operation was the procedure of choice. In appendicular abscess he recommended that the pus be evacuated before opening the abdomen. He reported a number of cases of peritoneal abscess and perforation of the appendix and one of rupture of the gall-bladder.

Dr. W. L. ESTES, of South Bethlehem, felt that the reason drainage did not produce the results expected in many cases was the improper method of its employment, and stated that in some cases an important factor, particularly in women, was the raising of the head of the bed.

Dr. WILLIAM L. RODMAN, of Philadelphia, did not favor the flushing of the abdominal cavity when the pus was confined to a limited and circumscribed area. He felt that while cholecystectomy had its field it should be confined to cases of gangrene or other disease of the gallbladder.

Dr. J. E. O'BRIEN, of Scranton, felt that the greatest need was for a competent surgeon, and remarked that during the last eight years Dr. Burns had operated in 112 cases of appendicitis, with but two deaths. An important factor in the production of these results had been the breaking up of adhesions and flushing the abdomen.

Observations on Cancer of the Head and Neck, with an Analysis of 110 Operative Cases, was the title of a paper read by Dr. GEORGE W. CRILE, of Cleveland, Ohio, in which he reported in detail 128 operations upon 110 patients. He believed that any operation which disseminated the growth was dangerous, and recommended one which contemplated a dissection of the regional lymphatics, as well as the primary focus, on the same line as the Halsted operation for cancer of the breast. He particularly urged the necessity for the treatment of cancer of the head and neck by the same surgical measures as would be employed in other parts of the body, and exhibited photographs and diagrams illustrative of the seat of infection and extensions. He also advised that the anæsthetic be given by means of a rubber tube by an assistant standing a foot or more away from the patient, and showed illustrations of the instrument designed therefor. In conclusion, he urged that sufficient tissue be removed to be sure to cover all the infected area.

Dr. ROBERT H. M. DAWBARN, of New York, recommended complete extirpation of the growth, even removing a portion of the deep jugular vein, if it was involved.

A New Intestinal Bobbin was the title of a paper read by Dr. JOHN G. CLARK, of Philadelphia. The device exhibited, which the author demonstrated on imitation intestines, consisted of a button for the purpose of bringing together the ends of the intestines, which after suture was separated into several pieces that were small enough to be easily passed through the bowels. He also illustrated the method of suturing and stated that in a number of experiments which had been conducted upon dogs the results had been entirely satisfactory, one of the most important points being the shortening of the operation.

Dr. RODMAN felt that in all cases, if possible, it was better to do without any mechanical appliances. He recognized the fact that the device offered was superior in many ways to the Murphy button, particularly as there was less likelihood of obstruction of the intestines, and felt that in an end to end anastomosis it would be of value.

Wandering Gallstones was the title of a paper read

by Dr. W. L. ESTES, of South Bethlehem, who stated that instances of indubitable perforation of the gallbladder were comparatively rare. If the ulceration was slow, and the patient survived the first septicæmic condition, the stones would burrow in the direction of the least resistance, and might be found in almost any part of the posterior portion of the right side of the abdomen. The prominent symptoms in these cases were great pain, tumor, and interference with the gastric and intestinal functions, jaundice being present only in the early stages or absent entirely, with general symptoms of septicæmia. He then reported two cases.

The Surgery of the Gallbladder and Ducts was the title of a paper read by Dr. J. M. BALDY, of Philadelphia, in which he referred to the fact that surgical intervention in this direction was limited to the gallbladder and ducts, and even this was handicapped by the meagre pathology and diagnosis. He felt that in many instances too radical measures had been instituted, and more conservatism would probably be better.

Dr. WALTER S. STEWART, of Wilkes-Barre, urged the early diagnosis and removal of gallstones from the bladder and the establishment of drainage. He reported a case in which, in doing an operation for ventral hernia, he incidentally examined the gallbladder and found it full of stones, and there were also stones in the common duct. He removed them and closed up the gallbladder without drainage on account of impossibility of doing so by reason of the other operation, and the woman made a good recovery.

Dr. NOBLE reported two cases of wandering gallstones. He stated that it was interesting to note a paper on gallstone surgery read by a gynecologist, and recalled the fact that the pioneers in this line had been gynecologists, Sims and Tait.

Decompressive Operations in Inoperable Brain Tumors was the title of a paper read by Dr. HARVEY W. CUSHING, of Baltimore. He referred in detail to the various methods for accomplishing this result, and felt that the bone should not be removed entirely, as, if it was, in a short time there would be a protrusion which frequently resulted in paralysis. The chief end to be attained was to relieve the pressure and still leave some sort of covering to keep the brain within the cranium, and the most favorable position for the operation he felt to be the intramuscular temporal region.

Dr. DAWBARN stated that he did not remove the bone entirely, but slipped a piece of nonirritating tissue between the edges in order to keep them from growing together. In those cases in which he found it necessary to remove the bone, he had covered the opening with a specially prepared celluloid which would not be absorbed, was nonirritant, and formed a protection against injury as well as cold.

Dr. SAMUEL KAY, of Scranton, presented a case supposed to be one of inoperable tumor of the brain, occurring in a child seven years of age, the pathological changes having taken place in the last three years. Intense exophthalmus is present, as is also polyuria.

Dr. T. H. WEISENBERG, of Philadelphia, stated that in many instances he had advised an operation for its palliative effect in cases of brain tumor.

The Direct Fixation of Fractures was the title of a paper by Dr. JOHN B. ROBERTS, of Philadelphia, in which he stated that while in most instances exterior appliances were sufficient, yet in some cases, owing to the character of the fracture, direct fixation was necessary. The author referred to the various methods employed for this purpose, including the use of wire, catgut, bone ferrules, metallic plates, etc., and stated that for transcutaneous fixation he had at first used an ordinary wire nail, but afterward devised a surgical nail with a sharp point. For the open fractures, or

closed fractures which had been explored, he believed better results were secured by means of staples or plates.

Dr. GEORGE W. GUTHRIE, of Wilkes-Barre, stated that his experience with direct fixation had been chiefly in cases of delayed union, and he preferred an end to end union and the insertion of a silver wire, which could be allowed to remain.

Dr. CHARLES E. THOMPSON, of Scranton, reported several cases of direct fixation, and referred especially to one in which a fracture of the femur was united by means of a wire nail. The man became able to walk around and it was supposed that there had been an actual union of the bone, but at the time of his death, 18 months later, it was found that all that held the bone in place was that single nail.

Dr. DEFOREST WILLARD, of Philadelphia, believed that the direct fixation method should be employed in all cases where it was necessary in order to bring the bones into position, either due to fragments of the bone or any other difficulty, and felt that the method should be decided by the individual case.

Dr. JOHN S. NILES, of Carbondale, referred to the facts that in the mining region many of the patients were not seen until several hours after they had been injured, and that the unsanitary surroundings made it impossible to employ this method without grave danger of infection. In but very rare instances could surgery be performed under aseptic conditions.

Dr. ROBERTS felt that the direct fixation of fractures immediately following the injury might in some cases prevent bony union by producing necrosis. In regard to the cases in which aseptic conditions could not be obtained, he recommended that the wound be disinfected and thoroughly cleansed before attempting direct fixation.

GENERAL SESSION, Dr. G. W. GUTHRIE, of Wilkes-Barre, in the chair.

How May the Scientific Meetings of County Societies Be Made More Profitable?—Dr. THEODORE DILLER, of Pittsburgh, in this paper, made, among others, the following suggestions: Efforts should be made to get all the members of the county societies to take part in the programme which should exhibit as much variety as possible as to men, methods, and methods of presentation. The "symposium" should not be repeated too often. The possibility of meeting at hospitals where physicians had patients who could be seen was thought worthy of consideration. Since all the members were physicians and not all surgeons, medical subjects should be discussed two or three times as often as surgical. A paper by a visiting physician was considered particularly desirable, and this should be discussed by local men. Occasionally the visiting physician should be appointed to discuss the papers of local men. For the best preparation of papers, it was suggested that nothing was so helpful as a critical study of the literary form of the best known medical writers. A single well reported case was thought to be the easiest task for the young man and the most acceptable.

Dr. CHARLES A. E. CODMAN, of Philadelphia, stated that the Philadelphia County Medical Society, which Dr. Diller referred to as meeting twice a month, virtually met seven times a month, since branch societies in different sections of the city met monthly.

The Question of Lowered Gastric Secretion.—In this paper Dr. CHARLES G. STOCKTON, of Buffalo, stated as a reason for reopening this question was the apparently growing belief that the digestive power of the stomach was unimportant to the well being of the organism. From an observation of some cases for at least 15 years he thought that, in the absence of or with a very low standard of gastric secretion, almost always individuals were found to have impaired health, and this often in the presence of relative good intestinal

digestion. He considered the question of stomachic digestion one of the greatest importance and one to be dealt with in the selection of an operation for the re-establishment of an adequate gastric drainage. From his own observation he concluded that normal gastric digestion was more likely to follow pyloroplasty than gastroenterostomy. The objections raised against pyloroplasty had not been apparent in patients whom he had seen, and he predicted that some form of pyloroplasty would replace gastroenterostomy in cases where it was practicable.

The Surgical Treatment of Cardiospasm.—Dr. EDWARD MARTIN, of Philadelphia, read this paper, reporting a case of cardiospasm in which he had opened the stomach and introduced three fingers through the cardiac orifice to stretch it. There was complete recovery with a gain of 40 pounds in six months.

The Treatment of Benign Stenosis of the Pylorus and Duodenum Resulting from Spasm and Scar Tissue and from Abdominal Adhesions.—Dr. ALBERT BERNHEIM, of Philadelphia, gave sketchy histories of the cases presented and detailed the treatment. He concluded that not all cases of dilatation of the stomach need necessarily be subjected to the knife of the surgeon.

The Symptomatology and Diagnosis of Cancer of the Stomach.—Dr. JOHN J. GILBRIDE, of Philadelphia, presented this paper. He stated his belief that the analysis of the stomach contents was not sufficiently recognized in this connection, and that if the method were employed diagnosis would be possible at a much earlier stage, with consequent benefit to the patient. A tumor of the stomach, in his opinion, did not necessarily occupy the epigastric region, for it was not uncommon to find one in other parts of the abdomen, and he recalled one case in the clinic of Professor Sailer in the Philadelphia Polyclinic in which a carcinoma of the pylorus was situated in the right iliac fossa.

Gastroenterostomy—Its Indications and Its Technics.

—Dr. WILLIAM L. RODMAN, of Philadelphia, described the technics of the operation, which he said meant literally an opening or communication between the stomach and some portion of the bowel below. His remarks had special reference to gastrojejunostomy, which was practically the only form of gastroenterostomy generally used at the present time. As done to-day, the operation was done by placing the communication between the stomach and the intestine on the anterior or posterior surface. The first operation was by the anterior method, consisting in bringing up the jejunum and anastomosing it with the lower end of the stomach. While it was far easier than the posterior operation, certain objections had caused it to fall practically into disuse at the present time. One objection to the anterior method was that the loop must be 18 or 20 inches long, and on that account the end of the loop filled up with the contents of the stomach and gave rise to regurgitant vomiting. Another objection was the fact that the loop, passing up in front of the transverse colon, might easily make compression upon the colon and cause intestinal obstruction. Adhesions between the loop and the transverse colon formed another source of danger. Even a greater objection was the fact that, the anastomosis being made so low in the upper alimentary canal, the upper portion of the intestine was placed out of commission and the patient did not therefore receive the same benefit from food taken into the stomach. The anterior operation was done to-day as a *dernier ressort*, when speedy operations seemed requisite, and in cancer it was still possibly the operation of choice. The technics of the posterior operation was then described in minute detail. The point which he particularly emphasized was the fact that the loop must be made short. Originally by this method it was made nine inches long, which, though satisfactory as compared with the result of the

anterior method, would permit of cases of the vicious circle. As the operation was done at the present day, emphasis was placed upon the importance of doing away with the loop and practically making an anastomosis between the stomach and the jejunum, in which case the disagreeable sequelæ would almost certainly be escaped. The various steps of the operations were illustrated by drawings for which Dr. Rodman acknowledged his indebtedness to Mayo, who he said had introduced many remarkable modifications upon the original operation.

Dr. JAMES TYSON cited two cases which had come under his observation, which he thought strikingly illustrated the purposes, the accidents, and the results of the operation. One case was that of a woman, aged 50, who had had a frightful hæmorrhage supposedly due to gastric ulcer. She survived the effects of the hæmorrhage and was in comparatively good health for three years, when she again had severe hæmorrhages. Gastroenterostomy was done, and for 48 hours the patient did well, and then died. In another case the vicious circle of vomiting set in following the operation and it seemed as if the woman must perish. A second operation was done and the woman was said to be in good health at present. Dr. Tyson expressed his belief that cases of gastric ulcer with dangerous hæmorrhage formed one of the most justifiable instances for operation.

Dr. JOHN B. ROBERTS said there was no doubt that gastric surgery had now become a more prominent branch of surgery than was the case a few years ago, and there was no doubt also that the earlier the cases were brought to the surgeon the more cures there would be. The difficulty which he had encountered was in making the diagnosis as to which cases were functional and which were organic, and in this connection he had opened the stomach, thinking after experts had made the usual examinations, that he would find some serious condition and had found practically nothing. With Dr. Stockton, he believed that pyloroplasty was more satisfactory than gastroenterostomy, either by the anterior or posterior method, and that it would be more frequently adopted within the next few years. A difficult question to decide was that of when to operate. He believed that if patients could be made to live hygienically, given happy homes and ample means, there would be few cases of functional disease; that it was bad living, drunken husbands, and unfortunate surroundings which brought the patients to the neurologist, to the surgeon, and to the general practitioner. If that class of cases could be got rid of and operations done only in the organic cases, it was his belief that surgery would have more triumphs and the graves fewer occupants.

Officers for the Ensuing Year were elected as follows: President, Dr. W. H. Hartzell, of Allentown; vice-president, Dr. Morgan J. Williams, of Scranton; secretary, Dr. C. L. Stevens, of Athens.

Next year's meeting will be held in Bedford Springs.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

One Hundredth Annual Meeting, held in Albany on Tuesday, Wednesday, and Thursday, January 30 and 31 and February 1, 1906.

(Continued from page 320.)

Vaginal Section.—In a paper on this subject, Dr. J. RIDDLE GOFFE, of New York, said that an experience of many years had shown him that vaginal section could be used to replace abdominal section for many gynecological procedures. By this was meant not vaginal puncture, for this had been discarded because of the danger of wounding bloodvessels or the intestines, but incision through the vaginal fornix for oper-

ative purposes. Posterior vaginal section had once been the elective route, but Dr. Goffe had found that anterior vaginal section gave more room and that the opening could be as large, at least, as the ordinary abdominal incision, and pathological conditions within the abdomen could be dealt with as freely through it. A more or less circular incision was made and the central portions were caught by forceps; then a longitudinal incision was made through all tissues down to the bladder, which was separated from the uterus by the finger or by means of a dull dissector. After practice it was not hard to find the line of cleavage, and by means of this free the vaginal wall from the bladder. The important matter was to find the vesicouterine ligament and then get behind this. An attempt to tear the tissues in this region might cause some risk of perforation into the bladder. After doing very many operations, however, Dr. Goffe was sure that this risk was greatly exaggerated by those who had not had much experience with this method of operating. The advantages of it were that the convalescence was easier and shorter than after an abdominal operation, that no unsightly scar was left on the abdomen, and that there were no unpleasant consequences.

This incision might be used for all conservative operations upon the appendages, for retroflexion or any other displacement of the uterus, or for ectopic gestation. Dr. Goffe had employed it both for cases of ectopic gestation where the hæmorrhage was recent and severe and for the cases in which a tumor had been formed because of the presence of blood in the folds of the broad ligament. It was especially useful for the cases in which no rupture of the gestation sac had as yet occurred and in which the diagnosis of extrauterine pregnancy depended on other circumstances. It was useful for the performance of Alexander's operation and for other manipulations of the ligaments which support the uterus. It was, after all, by means of its ligaments that the uterus was supported in position, and these could all be reached and displacements corrected better by the vaginal route than in any other way. Fibroid tumors might also be removed by the vaginal route, especially where they were small, and this was possible even when they were numerous.

Dr. MILLER, of Syracuse, said that the position of the uterus depended on the pelvic floor and the uplift of the perinæum rather than on the uterine ligaments. Some of the operations suggested would seem, then, to be scarcely justified by what we knew of the function of the parts.

Dr. FREDERICK HOLME WIGGIN, of New York, said that the vaginal route was very suitable in many cases of pelvic disturbance. In order to obtain room, the incision should be extended as far as the pubic arch if necessary. One of the most important features of the vaginal operation was that there was no handling of the intestines, and consequently no paresis of the bowel or disturbance of its function. The danger of infection was greatly decreased. Convalescence was shorter and much less uncomfortable than after the abdominal operation.

Dr. FORD, of Utica, said that Dr. Goffe undoubtedly possessed an excellent technique, and that he could use this method of operating where others would fail. Personally, Dr. Ford had found it to have a limited field in inflammatory conditions. When adhesions were present it was unsuitable. When pus was present the posterior incision was better because of the better drainage. Where even small tumors were present, especially if there were any adhesions, the abdominal incision was better. If the uterus was not fixed, the vaginal route might be employed. If there was pus, however, the posterior route was more favorable than the anterior.

Dr. ERNEST GALLANT, of New York, said that the

uterine ligaments did not hold the uterus up, but only steadied it. The uterus rested on the broad ligaments as on a pivot. The ligaments held the organ forward, and so a bridge was formed between the pubes and the perinæum. It was in this way that the uterus was held up. One of the main directions of pressure exerted by the contents of the pelvis was on the perinæum. This could be demonstrated even in the male by having the patient sit on the edge of a chair and cough while pressure was applied to the perinæum. To Dr. Gallant it seemed inadvisable to slice up the uterus for the removal of a few fibroids when careful examination after removal would probably show that the organ contained hundreds. It was better to remove such an organ.

Dr. HERMAN J. BOLDT, of New York, said that fifteen years ago he had been an enthusiast about vaginal work. With experience, however, he had found that the route was limited in many ways. It was not suitable for operations for extrauterine pregnancy, except perhaps in the extremely rare cases in which the diagnosis was made before rupture of the sac. From above, the operation could be performed more rapidly and safely. The inguinal route was better for operations upon the round ligament. This ligament was then shortened at its thinnest point instead of at its thickest portion, as in the vaginal operation. The original Alexander method was better.

Dr. BROTHERS, of New York, said that there were four qualities which commended an operation: Ease of performance, lack of danger of hæmorrhage, absence of shock, and ease of convalescence. The absence of shock and the shortening of convalescence were both enticingly present in the vaginal operation. The operation, however, was not easier unless after a great deal of experience, and even then not absolutely. There was, however, a distinct danger of hæmorrhage of a serious kind which could not but be very deterrent. It had formerly been supposed that there was almost a guarantee against sepsis. This, however, had not been found to be true, and the condition in this regard was not much better than after an operation through the abdominal route.

Dr. GOFFE said that at times the perinæum was torn through to the rectum, yet the uterus remained in place. It was its ligaments that retained it. Weight for weight, the uterus had more ligaments than any other organ in the body. When the perinæum was torn, there was a new active force caused by the act of defecation which constantly pushed forward the anterior wall of the rectum. There was then an active force pulling on the uterus, and it came down. Normally, however, it was retained in place by its ligaments.

Artificial Hyperleucocytosis in Infections.—Dr. WILLIS G. MACDONALD, of Albany, read a paper in which he said that if Metchnikoff's theory of phagocytosis was true, an increase in the number of the leucocytes should protect against infections and help the organism to combat those already begun. It had been found that by certain means the number of leucocytes could be increased. This artificial leucocytosis was as efficient as the natural increase in leucocytes for protective purposes. Certain substances, such as normal salt solution, horse serum, and the various antitoxines had been found to produce a greater or less leucocytosis. Certain other substances, among which were nucleinic acid and its derivatives, had been found to produce great leucocytosis without any harmful effects. Dr. Macdonald had been experimenting with these substances in order to determine how efficient against infection was the hyperleucocytosis which they produced. He had been using especially sodium nucleinate. He had found that in from twelve to twenty-four hours after a subcutaneous injection of sodium nucleinate, a marked leucocytosis made its appearance. In certain

cases, then, where infection was expected, as after injuries on the street and wounds that had become infected before the patients came to the hospital, the method was employed with a distinct advantage. In the case of a little girl of eleven, in whom the rupture of a volvulus had given rise to a serious infective intraabdominal condition, the method had seemed to be life saving. In general, it could be employed wherever bacteria might be expected to find their way to the site of an operation, as after resections of the intestinal canal or in operations about the mouth or the anus, where infection was sure to occur. In Breslau the experience had been that it lessened the mortality. It had been suggested that it might be of use also in puerperal sepsis.

The Oration in Surgery, by Dr. ROSWELL PARK, of Buffalo, was read by Dr. Hopkins, of Buffalo, in the absence of its author. It will be published.

The Surgery of the Future.—In an address thus entitled, Dr. W. W. KEEN, of Philadelphia, said that, while the surgery of the past was interesting, the alluring possibilities of the next hundred years tempted him to wish that he could be alive to see the progress that would be made. This progress would come mainly in the developments of serums and antitoxines, in the devising of newer procedures, and in the learning to make use of Nature's wonderful compensatory powers when injuries had taken place. There seemed to have been very much advance made in the last twenty-five years, but only the thin edge of progress was as yet presented to us. Antisepsis and asepsis made the possibilities of surgery very much greater than they could have been thought. Dr. Keen was born forty years before the introduction of Lister's great principles into surgery, and he felt in a way that those years had been wasted. The younger generation of surgeons, however, should enter upon its work with the consciousness of the possibilities just ahead, and that of itself should prove sufficient stimulus for great original work.

Exophthalmic Goitre.—Dr. W. GILMAN THOMPSON, of New York, discussed some of the theories of the causation of exophthalmic goitre, and pointed out that there could now be scarcely any doubt left of its toxic origin. In forty-three cases carefully studied, four in males and thirty-nine in females, analysis of the symptoms showed that most of them were probably of toxic origin. The tremor, the sweating, the œdema, the gastrointestinal symptoms, the tendency to erythema, the emaciation, and many other features were evidently due to toxines present. Some recent observations in the successful treatment of the disease by an antitoxic serum made in New York seemed to emphasize this conclusion. Dr. Rogers had succeeded in obtaining a serum which neutralized the toxæmia of exophthalmic goitre and brought about improvement.

In answer to a question, Dr. Thompson said this serum had no effect on plain goitre, and this was, of course, what might be expected, since there were no toxic symptoms in that affection. The conversion of simple goitre into exophthalmic goitre was sometimes seen, but the difference between the two conditions was very marked and the additional toxic element in Graves's disease quite clear.

Book Notices

Tuberkulin und Organismus. Eine kritische und literarische Studie zur Wertung des Alttuberkulins in der Gegenwart nach biologischen Gesichtspunkten und auf Grund der bisherigen Erfahrungen. Dem internationalen Tuberkulosekongress zu Paris, 1905, gewidmet von Dr. med. F. KÖHLER, Chefarzt der Heilstätte Holsterhausen bei Werden (Ruhr). Jena: Gustav Fischer, 1905.

We have here a comprehensive monograph on everything of interest pertaining to Koch's original tuberculin. Since it was first presented to the profession, in 1890, a sufficient length of time has elapsed to permit the rendering of a final judicial opinion as to its value, and this has been well done in this admirable study by Dr. Köhler. His work bristles with convincing statistics and numerous citations from all the best authorities which are accompanied by valuable criticisms and observations of his own. It is conclusively shown that tuberculin is too variable and uncertain in its action to be of much value even in diagnosis, and as a means of treatment it has been practically abandoned. Under some circumstances which cannot be accurately defined its use may be dangerous for the patient. As many as fifteen per cent. of all tuberculous cases do not react to it at all. The reaction may frequently be obtained in healthy persons who show no evidence clinically of tuberculous disease and give no history of ever having had it. Young children are extremely insensitive to tuberculin. In any case the negative result is of more value than the positive. The reaction usually fails in advanced cases. The typical phenomena of a good reaction have been obtained in cases of leprosy, syphilis, actinomycosis, carcinoma, and chlorosis.

Miscellany

Rabelais as a Physician.—It is a matter of common knowledge that the creator of *Gargantua* began life as a monk, and after passing from one order to another, gathering vast erudition on the way, threw off the cowl and replaced it with the doctor's cap. He was about 40 when he entered the university of Montpellier as a student of medicine. His progress was amazingly rapid, for having matriculated on September 17, 1530, he became a bachelor of medicine on December 1st following. He forthwith began to lecture on the Aphorisms of Hippocrates and the *Ars Parva* of Galen. Towards the close of 1531 he was appointed physician to the Hôtel-Dieu at Lyons, and though he was only a bachelor assumed the title of doctor—an early instance of a practice which has since become common enough. The irregularity of his attendance got him into trouble with the hospital authorities, and in 1535 his services were dispensed with. Returning to Montpellier, he studied for some time, and in April, 1537, passed his examination for the degree of licentiate. Promotion to that of doctor followed in due course. Rabelais, notwithstanding the somewhat erratic character of his studies, gives in his famous work innumerable proofs of his thorough knowledge of the medical science of his day. He is fond of anatomical details, which are generally remarkably accurate; he is known to have practised dissection at Montpellier, and a claim has seriously been put forward on his behalf that he was a pioneer of scientific anatomy before Vesalius. He modified an apparatus for the treatment of fractured leg described by Galen and gave it the imposing name of "glossocomion." Although the drawing of this apparatus gives one the impression of an antique engine of war, it seems to have been regarded as a distinct improvement in surgical practice; and so great a man as Ambroise Paré did Rabelais the honor of appropriating the invention without thinking it necessary to mention from whom he had got the idea. Rabelais also devised a syringotome or probe pointed guarded bistoury, which was used to divide the peritonæum in penetrating wounds of the abdomen. Of Rabelais's medical practice, whether at Lyons or elsewhere, little is known. He was titular physician to princes of the Church, such as Cardinal du Bellay and Cardinal de Langey, but it may be conjectured that this position was for his own protection rather than theirs. There is, indeed, evidence that in 1540 he was

consulted by the bishop of Narbonne on a matter as to which he may have been supposed to possess special enlightenment. The case propounded to him was as follows: Philippus Saccus, president of Milan, had taken counsel of the doctors of Bologna and Venice on the question whether a daughter who had just been born unto him could be regarded as got 'twixt the lawful sheets. It was on October 26, 1539, at the fourth hour of the night before the new moon that the president first had carnal knowledge of his wife; and long before the nine months required by Nature were fulfilled a fine girl, having all the appearance of being a full term child, had made her entry on the stage of the world. Unfortunately there is no record of Rabelais's solution of the problem. In a thesis presented not long ago to the medical faculty of the university of Paris for the degree of doctor of medicine, M. Maurice Mollet deals with Rabelais as a clinician. A fairly complete notion of the therapeutics of the sixteenth century may be obtained from his writings. He not only mentions the remedies, but indicates their uses, and by the extravagant praise bestowed upon some of them evidently intends to ridicule the folly or superstition of those who believed in their virtues. He invented a condiment made of salted fish, "garus," anchovy, or sardine, seasoned with various spices, which he called garum, and recommended to his friend, Etienne Dolet, as the best thing for a man who passed his life bent over books, to restore appetite, purge the humors, and move the bowels. This green sauce, whose virtues were celebrated by Dolet in Latin, and by Clément Marot in French, verses, had a great vogue for some time, and is still used in a much modified form in some villages of the South of France.—*The British Medical Journal.*

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the week ended February 9, 1906:

UNITED STATES

Places.	Date.	Cases.	Deaths.
California—San Francisco.....	Jan. 20-27.....	8	
Florida—Barberville.....	Jan. 27-Feb. 3.....	4	
Florida—Lakeland.....	Jan. 27-Feb. 3.....	3	
Florida—St. Petersburg.....	Jan. 27-Feb. 3.....	3	
Florida—Seffner.....	Jan. 27-Feb. 3.....	1	
Georgia—Augusta.....	Jan. 22-29.....	1	
Kansas—in 23 counties.....	Dec. 1-31.....	145	
Kentucky—Covington.....	Jan. 27-Feb. 3.....	1	
Louisiana—New Orleans.....	Jan. 27-Feb. 3.....	9	
Michigan—Ann Arbor.....	Jan. 27-Feb. 3.....	1	
Michigan—Detroit.....	Jan. 27-Feb. 3.....	1	
Missouri—St. Louis.....	Jan. 27-Feb. 3.....	1	
Nebraska—South Omaha.....	Jan. 27-Feb. 3.....	1	
Ohio—Cincinnati.....	Jan. 26-Feb. 2.....	5	
Pennsylvania—Altoona.....	Jan. 27-Feb. 3.....	1	Imported.
Pennsylvania—Lancaster.....	Dec. 30-Jan. 6.....	1	
Utah—in 8 counties.....	Dec. 1-31.....	111	
Virginia—Norfolk.....	Feb. 2.....	10	At Craney Island Hos- pital, 138.
Wisconsin—Appleton.....	Jan. 27-Feb. 3.....	7	

SEMI-PROTECTOR

Africa—Cape Town.....	Dec. 9-16.....	1	
Argentina—Buenos Ayres.....	Nov. 1-30.....	41	
Brazil—Pernambuco.....	Dec. 1-15.....	42	
Brazil—Rio de Janeiro.....	Dec. 24-Jan. 7.....	3	
Canada—New Brunswick.....			
Kings County.....	Jan. 29.....	Present.	
Queens County.....	Jan. 29.....	Present.	
Simsbury County.....	Jan. 29.....	Present.	
Toronto.....	Jan. 13-27.....	3	
Chile—Antofagasta.....	Jan. 4.....	26	12
Chile—Iquique.....	Dec. 24-31.....	20	6
China—Hongkong.....	Dec. 16-29.....	3	3
China—Shanghai.....	Dec. 27.....	Present.	
Ecuador—Guayaquil.....	Dec. 31-Jan. 14.....	9	
Great Britain—Bristol.....	Jan. 13-20.....	1	1
Great Britain—Liverpool.....	Jan. 13-20.....	2	Imported.
India—Bombay.....	Jan. 2-9.....	6	
India—Calcutta.....	Dec. 16-30.....	55	
India—Madras.....	Dec. 16-Jan. 5.....	36	
India—Rangoon.....	Dec. 16-30.....	17	

Italy—General.....	Jan. 11-18.....	10	
Mexico—Tehuacan.....	Jan. 2-30.....	3	
Russia—Moscow.....	Jan. 1-10.....	10	1
Russia—Odessa.....	Jan. 6-11.....	11	1
Spain—Barcelona.....	Jan. 10-20.....	6	
Brazil—Rio de Janeiro.....	Dec. 24-Jan. 7.....	6	2
Cuba—Habana.....	Feb. 2.....	1	
Cuba—Matanzas Province.....	Feb. 5.....	1	
Ecuador—Guayaquil.....	Dec. 31-Jan. 14.....	13	1
Mexico—Veracruz.....	Jan. 1-20.....	2	1
Philippines—Luzon.....	Dec. 2-20.....	3	
Bataan Province.....	Dec. 4.....	Present.	
India—Calcutta.....	Dec. 16-30.....	129	
India—Madras.....	Dec. 16-Jan. 5.....	13	
India—Rangoon.....	Dec. 21-30.....	16	
Philippine Islands—Manila.....	Dec. 16-23.....	1	1
Brazil—Rio de Janeiro.....	Dec. 1-14.....	8	1
Chile—Antofagasta.....	Dec. 20-27.....	3	
China—Hongkong.....	Dec. 16-23.....	3	
India—Bombay.....	Jan. 2-9.....	17	
India—Calcutta.....	Dec. 16-30.....	33	
India—Madras.....	Dec. 16-Jan. 5.....	6	
India—Rangoon.....	Dec. 16-30.....	30	
Japan—Formosa.....	Nov. 24-Dec. 31.....	15	14
Peru—Callao.....	Dec. 21-Jan. 11.....	1	1
Peru—Chilayo.....	Jan. 4-6.....	Present.	
Peru—Lima.....	Dec. 21-Jan. 11.....	10	5
Peru—Salaverry.....	Jan. 6.....	Present.	
Peru—San Pedro.....	Dec. 21-Jan. 11.....	2	1
Peru—Trujillo.....	Dec. 21-Jan. 11.....	17	10
Peru—Nueva.....	Dec. 21-Jan. 11.....	17	1

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending February 7, 1906.

GRUBBS, S. B., Passed Assistant Surgeon. Bureau letter granting him twenty-one days' leave of absence from February 2, 1906, amended to read twenty-one days from February 7, 1906.

HOLT, J. M., Passed Assistant Surgeon. Leave of absence granted for two months from January 15, 1906, on account of sickness amended so as to be effective from January 23, 1906.

KALLOCH, P. C., Surgeon. To proceed to Boston and New Bedford, Mass., on special temporary duty, upon completion thereof to rejoin station at Portland, Me.

MONCURE, J. A., Acting Assistant Surgeon. Granted leave of absence for thirty days from February 15, 1906.

NYDEGGER, J. A., Passed Assistant Surgeon. Granted seven days' leave of absence from February 5, 1906, under Paragraph 191 of the Regulations.

WALKLEY, W. S., Acting Assistant Surgeon. Granted twenty-five days' leave of absence from February 6, 1906.

WIGHTMAN, W. M., Assistant Surgeon. Granted seven days' leave of absence from January 26, under Paragraph 191 of the Regulations.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the United States Army for the Week Ending February 10, 1906:

BAKER, FRANK C., Captain and Assistant Surgeon. Advanced from the grade of first lieutenant to that of captain, to date from February 4, 1906.

BLOOMBERG, H. D., First Lieutenant and Assistant Surgeon. Ordered to proceed to Fort Leavenworth, Kansas.

BRECHEMIN, LOUIS, Lieutenant Colonel and Deputy Surgeon General. Granted leave of absence for one month, on account of sickness.

CORBUSIER, WILLIAM H., Lieutenant Colonel and Deputy Surgeon General. Ordered to proceed to Vancouver Barracks, Washington, for duty as Chief Surgeon, Department of the Columbia. Granted three months' leave of absence.

FAUNTLEROY, P. C., Captain and Assistant Surgeon. Ordered to proceed from Fort Porter, N. Y., to New

York, N. Y., and report for duty as surgeon on the transport *Sumner* during its voyage to the West Indies, and upon return of transport to New York, N. Y., will rejoin proper station.

HATHAWAY, L. M., First Lieutenant and Assistant Surgeon. Ordered to Jeffersonville, Ind., to examine male clerks and stenographers at quartermaster's depot, to determine whether they are mentally and physically qualified for service in the Philippine Islands.

HOFF, JOHN VAN R., Colonel and Assistant Surgeon General. Relieved from duty in the office of the Chief of Staff, to take effect February 15, 1906. Granted fourteen days' leave of absence.

KIERSTED, HENRY S., Captain and Assistant Surgeon. Advanced from the grade of first lieutenant to that of captain, to date from February 4, 1906.

LE WALD, LEON T., First Lieutenant and Assistant Surgeon. Ordered to proceed to Fort Slocum, N. Y. Granted seven days' leave of absence.

McCaw, W. D., Major and Surgeon. Left Washington, D. C., on sixteen days' leave of absence.

MORRIS, SAMUEL J., First Lieutenant and Assistant Surgeon. Ordered to proceed to Fort Schuyler, N. Y.

MORSE, ARTHUR W., Captain and Assistant Surgeon. Advanced from the grade of first lieutenant to that of captain, to date from February 4, 1906.

MURTAGH, JOHN A., First Lieutenant and Assistant Surgeon. In addition to present duties, ordered to take charge of the medical supply depot, San Francisco, Cal., during the absence of Lieutenant Colonel Brechemin, Deputy Surgeon General.

PURNELL, HARRY S., First Lieutenant and Assistant Surgeon. Ordered to proceed to Fort Mackenzie, Wyoming. Granted twenty-one days' leave of absence.

REYNOLDS, F. P., Major and Surgeon. Leave of absence extended fourteen days.

SCOTT, GEORGE H., First Lieutenant and Assistant Surgeon. Leave of absence extended twenty days.

SMITH, L. L., First Lieutenant and Assistant Surgeon. Assigned to duty in the Army Transport Service, and will report to the superintendent of that service at San Francisco, Cal., for duty.

SNODDY, CARY A., First Lieutenant and Assistant Surgeon. Ordered to report in person to the commanding officer, Fort Barrancas, Fla., for duty.

SWEAZEY, VERGE E., First Lieutenant and Assistant Surgeon. Ordered to proceed to Washington Barracks, D. C., and report to the commanding officer of the General Hospital at that port for observation and treatment.

WILSON, WILLIAM H., Captain and Assistant Surgeon. Ordered to proceed from New York to Schuylkill Arsenal, Pa., on official business.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 10, 1906:

ANGENY, G. L., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from April 24, 1905.

BENTON, F. L., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from March 3, 1903.

BERTOLETTE, D. N., Medical Director. Commissioned a medical director, with the rank of captain, from April 5, 1905.

BEYER, H. G., Medical Inspector. Commissioned a medical inspector, with the rank of commander, from April 5, 1905.

DEAN, F. W. S., Assistant Surgeon. Detached from the *Frolic* and ordered to the *Oregon*.

DE BRULER, J. P., Assistant Surgeon. Detached from the *Elcano* and ordered to the *Oregon*.

DE VALIN, C. M., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from March 3, 1903.

DYKES, J. R., Assistant Surgeon. Detached from the *Baltimore* and ordered to the *Oregon*.

FURLONG, F. M., Surgeon. Commissioned a surgeon with the rank of lieutenant commander, from June 20, 1903.

GARDINER, J. E., Medical Inspector. Commissioned a medical inspector, with the rank of commander, from December 17, 1905.

GARTON, W. M., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from March 12, 1903.

GRIEVE, C. C., Assistant Surgeon. Detached from the *Oregon* and ordered to the *Frolic*.

GUTHRIE, J. A., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from December 15, 1904.

HOYT, R. D., Passed Assistant Surgeon. Commissioned a passed assistant surgeon, with the rank of lieutenant, from May 8, 1905.

KERR, D. B., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from April 5, 1905.

McCULLOUGH, F. E., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from June 9, 1903.

ORVIS, R. T., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from March 1, 1905.

RENNIE, W. H., Assistant Surgeon. Detached from the Naval Station, Cavite, P. I., and ordered to the *Elcano*.

STEELE, J. M., Medical Inspector. Commissioned a medical inspector, with the rank of commander, from December 16, 1905.

THOMPSON, J. C., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from March 3, 1903.

Births, Marriages and Deaths.

Married.

BAXTER—MOORE.—In Buffalo, N. Y., on Wednesday, January 31st, Dr. Robert J. Baxter and Mrs. Alice F. Moore.

NOLAN—STEVENSON.—In Brooklyn, N. Y., on Monday, February 5th, Dr. John Paul Nolan and Miss Elizabeth Marguerite Stevenson.

SPEAR—WHITE.—In Gardiner, Maine, on Thursday, February 8th, Dr. Louis M. Spear and Miss Marion White.

Died.

DALRYMPLE.—In Branchville Borough, N. J., on Saturday, February 3rd, Dr. Edward S. Dalrymple, aged forty-three years.

DENNETT.—In Saco, Maine, on Wednesday, January 30th, Dr. Lora D. Dennett, aged fifty-five years.

ELY.—In New Haven, Connecticut, on Wednesday, February 7th, Dr. John Slade Ely, aged forty-six years.

GIBBS.—In Washington, D. C., on Wednesday, January 30th, Dr. Thomas F. Gibbs, aged sixty-nine years.

HANNAH.—In Thomaston, Georgia, on Saturday, February 3rd, Dr. G. W. T. Hannah.

HOBSON.—In Philadelphia, Pennsylvania, on Tuesday, January 30th, Dr. William H. Hobson, aged thirty-six years.

LUCE.—In Chilton, Wisconsin, on Wednesday, January 30th, Dr. J. E. Luce.

MACMARTIN.—In Spokane, Washington, on Friday, February 2nd, Dr. Daniel M. MacMartin, aged fifty-two years.

PAYAN.—In Providence, Rhode Island, on Wednesday, January 30th, Dr. Francis A. Payan, aged fifty-two years.

ROBERTSON.—In Baltimore, Maryland, on Wednesday, January 31st, Dr. William Williams Robertson, aged sixty years.

SAWIN.—In Providence, Rhode Island, on Thursday, February 1st, Dr. Isaac W. Sawin, aged eighty-two years.

SHARP.—In Washington, D. C., on Saturday, February 3rd, Dr. De Haven Sharp, aged twenty-seven years.

SWAN.—In New York, on Sunday, February 4th, Dr. William E. Swan.

TERHUNE.—In Passaic, N. J., on Monday, February 5th, Dr. Richard Albert Terhune, aged seventy-seven years.

TOWAR.—In Boston, Massachusetts, on Saturday, February 3rd, Dr. George A. Towar, of Watertown, Massachusetts.

New York Medical Journal

INCORPORATING THE

Philadelphia Medical Journal and The Medical News

A Weekly Review of Medicine

VOL. LXXXIII, No. 8.

NEW YORK, FEBRUARY 24, 1906.

WHOLE No. 1421.

Original Communications.

RHEUMATIC FEVER (ACUTE ARTICULAR RHEUMATISM)*

By JOHN V. SHOEMAKER, M. D., LL. D.,

PHILADELPHIA.

Although rheumatism has been known to mankind from the earliest times, it was not clearly differentiated from gout until nearly three centuries ago, when Bellonius, who had his interest pointedly directed to the subject by his personal experience with an attack of rheumatism, first established the diagnosis. Up to that time (1642) both diseases were included under the title of "arthritis." It was then observed that one of the distinguishing characters of acute rheumatism was that it was not nocturnal in its onset, like gout, but appeared at any hour of the day or night. Its principal exciting causes were recognized as exposure to cold and severe muscular exertion, together with the influence of predisposition, or personal susceptibility, as shown by repeated attacks. As regards the affected articulations, there was observed a predilection for the large joints over the smaller ones, and also the shifting character of the inflammation from one part of the body to another. Lastly, the fever, with the profuse sweating, and a tendency to various forms of skin eruption, were noted in establishing the clinical identity of the disease. Its existence in a chronic form has also long been known.

If I ask your consideration of such a trite subject as rheumatic fever, otherwise known as acute articular rheumatism, it is because it is a disease that is so common as to constantly demand our attention, and it is important that we should have clear cut ideas of its pathology and clinical cause in order to institute a scientific and successful therapeutics. Notwithstanding the fact that the disease has been known for so long, and that it is of such frequent occurrence, there is still uncertainty and disagreement among authorities as to its essential nature, and consequent diversity in the details of treatment.

In the first place, let us very briefly consider the etiology of acute rheumatism. Of late years, since bacteriology has become a recognized department of medicine and surgery, many clinical authorities have included acute rheumatism in the group of infectious diseases. Some have implicated a staphylococcus, others a streptococcus, while a large num-

ber consider the evidence sufficient to indicate a diplococcus as the exciting cause of the disease. In a certain number of cases the micrococcus lanceolatus or pneumococcus has been recognized in the blood. Flexner and Barker¹ endeavored to harmonize all the theories in dispute by suggesting that acute rheumatism has no ætiological unity, but it may be caused by the entrance into the blood of one of several different pathogenic organisms under circumstances which lead to the development of inflammations of serous or fibrous membranes, instead of developing a general septicæmia of ordinary clinical type.

The latter hypothesis is in accord with our knowledge of acute endocarditis, which so frequently appears during the course of rheumatic fever. Endocarditis does not occur without the presence of bacteria, but no one species is held accountable for its production.² But how shall we reconcile this with the testimony of Sittman, Singer, Kraus, and Kulman, who from elaborate studies of the blood and urine, conducted with great care in a large number of cases, obtained only negative results. The conclusions of these observers, in fact, leave no room for doubt that the blood in acute articular rheumatism is sterile.³

I think that the explanation is afforded if the infection be regarded as a secondary phenomenon. This view is in harmony with the fact that acute endocarditis does not occur in all cases of rheumatic fever, and when it does appear it is a late and not an early phenomenon. The source of the infection may be through the tonsils, at a time when the resisting powers of the blood have been reduced by the pyrexia, and the rheumatic poison in the circulating fluids.

My opinion, therefore, is that acute rheumatic fever is not, properly speaking, an infectious disease, and that although in many instances infection with several forms of pathogenic bacteria may occur, this septicæmic condition is a secondary development; it is accidental and not incidental, and there are typical cases of acute articular rheumatism in which no such infection takes place. I have not the time at present to enlarge upon this important distinction, but it has a very direct bearing upon the treatment of the disease, as all must admit.

If, however, acute rheumatic fever be not primarily caused by bacteria, then to what is it due?

¹ *American Journal of the Medical Sciences*, 1894, quoted by Tyson, *Practice of Medicine*, Third Edition, 1903.

² Hekt on and Riesman, *An American Textbook of Pathology*, Philadelphia, 1901, p. 525.

³ James Ewing, *The Clinical Pathology of the Blood*, Philadelphia, 1901, p. 286.

* Delivered before the Berks County Medical Society, Reading, Pa., January 9, 1906.

I ask you to recall the histories of your cases, and to say what was the cause assigned by the patients themselves. I think the preponderance of testimony would be that hardship, exposure to cold and damp, and severe muscular exertion appeared to be the exciting causes. Now, if we consider the physiological effects upon the organism of these agencies, we will observe: 1. Nervous exhaustion from fatigue, 2. increase in the blood of waste products from muscular tissue, and 3. chilling of the surface of the body, with contraction of the superficial vessels, and congestion of the internal organs, notably the liver.

Just here I would refer to a theory which may possibly throw some light upon the proximate cause of rheumatism. At the present day much attention has been given to what are known as the internal secretions of the various organs, all of which appear to exercise important functions in controlling metabolism and in sustaining the normal condition. I simply submit for your consideration the possibility of certain muscular products, analogous to internal secretions, being instrumental in producing the pathological condition we are now studying.

The fact that the liver may coincidentally have its action impaired by portal congestion or some disturbance of the solar plexus may be a necessary adjunct. We also recognize a third factor, in the personal susceptibility of the patient, and it is well known that this may be inherited.

It was not my intention, however, to dwell at any length upon the pathology of the disease, and I have only done so to the extent that I deemed necessary in order to indicate a rational treatment.

In my early years in the practice of medicine in the country with my honored preceptor, I remember going to the woods to gather the leaves and berries of the wintergreen, *gaultheria procumbens*. Many a case I have seen of incipient rheumatic fever, with swollen, tender joints, which would be put to bed, and dosed with the hot infusion of the herb and berries of wintergreen, and made to sweat profusely, with the result that in a few days their symptoms entirely disappeared, and the patients went back to their daily work. If any pains remained, they were relieved by rubbing with oil of *gaultheria*, or of birch. The principal agent in the treatment was the methyl salicylate, contained in the wintergreen, and this is still a favorite remedy with me.

The first substantial contribution to the therapeutics of acute rheumatism was made by Dr. MacLagan, of Dundee, Scotland, who, in March, 1876, published in the *Lancet* his experiences in the use of salicin during the preceding two years. This came as a revelation to the medical world, which had just arrived at the conclusion that rheumatic cases got well about as quickly without any treatment whatever as with the remedies then in vogue. The salicin treatment was taken up with enthusiasm at Guy's Hospital, and the results were shown by Fagge to be much better than those in Gull and Sutton's cases of the disease when allowed to follow its natural course. The salicin treatment, in fact, relieves the pain, shortens the disease, and in my opinion reduces the danger of bacterial infection, and thus diminishes the risk of endocarditis and other bacterial complications. As already intimated, I usually supplement its internal administration by

local applications of oil of *gaultheria*, the joints being enveloped subsequently in absorbent cotton, all surrounded by a flannel bandage.

In this connection I wish to say that I condemn the use of salicylic acid and all other coal tar preparations in the treatment of acute articular rheumatism. Stricker, of Berlin, introduced salicylic acid in the treatment of rheumatism in the same year that MacLagan published his results from salicin. At the present day, salicylic acid and its sodium salt have largely superseded the natural glucoside salicin in our practice; but I am of the opinion that the latter is more readily accepted by the stomach, and is less irritating to the digestive organs and has not the depressing effect upon the heart as salicylic acid. Whereas many cases cannot take salicylic acid on account of its action upon the stomach and the nervous phenomena, and the eruption upon the skin, I have not yet seen a case in which any of these accidents followed the use of salicin. In my opinion, salicin bears to acute rheumatism very much the same relation that quinine does to malaria; in other words, that its action entitles it to be regarded as possessing a special therapeutical relation to the disease.

As regards accessory treatment, I have found alkalies very useful. The increased acidity of the urine and the acid sweat point to a decrease in the alkalinity of the blood and afford the indication for the administration of alkalies. Those which at the same time exert a diuretic action, like the citrates and acetates, are preferred. To be especially named are the potassium citrate and the solution of ammonium acetate. The neutral mixture and effervescing draught are very suitable. Since there occurs in acute rheumatism a rapid loss of red blood corpuscles and destruction of hæmaglobin, some chalybeate preparation will generally be required. This may be given separately, as the tincture of the iron chloride or some of the newer combinations, or it may be given at the same time as the alkalies, in the form of Basham's mixture, liquor ferri et ammonii acetatis. Where the pulse is rapid and the heart action weak, it is advisable to also combine strychnine with the preceding; or the infusion of digitalis may be given internally, combined with the alkali (such as potassium citrate or sodium bicarbonate) and the strychnine may be given hypodermically, at suitable intervals.

With regard to antipyretics, I am strongly opposed, as I have just said, to the use of any and all of the coal tar derivatives in this disease. In ordinary cases, no febrifuge treatment is required other than the neutral mixture, effervescing draught, or Basham's mixture. The temperature, however, must be frequently observed, and if it rises suddenly several degrees and maintains an elevation of 103° F. or over, there is danger of the development of cerebral rheumatism, which is a serious and often a fatal complication. While, as pointed out by Da Costa,⁴ this condition is not entirely due to high temperature, and often is accompanied by albuminuria, indicating kidney involvement, still the method of treating it with cold affusions, or the cold bath, frequently repeated so as to keep down the temperature of the patient, has given us the best results, and has succeeded in saving some apparently hope-

⁴ *American Journal of the Medical Sciences*, January, 1875.

less cases. It is well in these patients to precede the bath with an alcoholic stimulant in order to cause dilatation of the peripheral blood vessels. The heart should be sustained by hypodermic injections of strychnine and digitaline. The prolonged application of an ice bag to the præcordium has been recommended to combat hyperpyrexia.

Just here I may remark that small doses of morphine ($\frac{1}{8}$ to $\frac{1}{12}$ grain) may be given from time to time to relieve pain and restlessness and to enable the patient to sleep at night. Atropine may be used in conjunction with it, but only in small doses (0.005 grain), as it should not interfere with the action of the skin. On the other hand, if the skin be too dry, small doses of pilocarpine may be injected under the skin, and warm drinks administered to assist its operation.

A few moments ago I spoke of the congestion of the portal system and the defective action of the liver. Having this condition in mind, I invariably begin the treatment of a case of acute rheumatic fever with a cholagogue cathartic. My preference is for a good dose of calomel (ten or fifteen grains), and I usually combine it with sodium bicarbonate, and in some instances with resin of podophyllum.

One more point in the treatment. I have referred to the tonsil as the probable portal of entry for the infectious organisms. I therefore deem it important, in every case, to order a disinfectant mouth-wash and gargle, like the antiseptic solution of the new pharmacopœia. I also direct that the teeth shall be scrubbed twice a day. A few drops of tincture of myrrh may be dropped in the water which is used for wetting the toothbrush.

If I now summarize the treatment of a case of acute rheumatism, I would say that it consisted in placing the patient in a bed in a well ventilated, comfortable room, in order to afford complete rest to his muscles. I would allow him a moderate amount of food, principally broths, stale or toasted bread and butter, and weak tea or coffee, with an occasional egg, avoiding articles that ferment readily in the stomach, such as pastry and preserves. Meat is only allowed after the decline of the fever, when convalescence seems assured. The affected joints are gently rubbed with a linament such as the following:

R Olei gaultheriæ.....3ii;
Lin. saponis.....q. s. ad .3ii.

M.

They are then to be enveloped in cotton, and this is kept in place by a flannel bandage.

Internally, my prescription would be:

R Salicin.....gr. x;
Ft. charta No. I. Mitte No. xii.

To be given every one or two hours, after the alimentary tract has been emptied by a cholagogue cathartic.

Another prescription to support the heart and counteract the anæmia would be:

R Strychnine acetatis.....gr. $\frac{1}{2}$;
Ferri citratis.....3i;
Liq. ammonii acetatis.....f3iv;
Syr. aurantii rubri.....q.s. ad f3vi.

M.

Sig.: Give a tablespoonful every three hours, in a wine-glassful of water.

In patients suffering with malarial infection, from 8 to 12 grains of quinine hydrochloride may be added to the daily treatment; or this may temporarily take the place of the salicin.

During convalescence recovery may be hastened by vapor, or hot air, baths, given once daily. Should infection occur as manifested by endocarditis or pericarditis, the salicin should be continued, perhaps in larger doses, and measures should be taken to counteract the septicæmia by stimulants, injections of normal salt solution into the colon, and the application of blisters to the joints, carefully guarding against strangury. Painting the surface of the skin with tincture of iodine also exercises a revulsive effect.

As subacute rheumatism is merely a mild form of the acute, I will not dwell upon it, the principles of treatment are the same.

As regards chronic rheumatism, here we have to do with some of the sequelæ of former attacks, as well as a tendency to recurrence of the acute affection. There may be fibroid thickening, and adhesions between muscular bundles, which limit the movement of neighboring articulations and cause pain on motion. It is in these cases especially that iodine is so serviceable, both as an external application and internally in the form of potassium, sodium, or strontium iodide.

Rheumatism may occur in a gouty subject, and in these cases it often attacks the smaller articulations. In such cases, the lithia preparations, especially the mineral waters containing lithia, are of great use, especially when combined with the classical treatment with colchicum. These remarks do not apply to rheumatoid arthritis, or so called rheumatic gout, which is a distinct disease, and calls for a special diet, cod liver oil, arsenic, sulphur, phosphorus, massage, and electricity.

Finally, I would call attention to the value of local treatment in chronic rheumatism, especially by massage, electricity, and the dry heating apparatus. Static electricity is a powerful stimulant to the nerves and blood vessels of the part, and also can be utilized with great advantage in the treatment.

1519 WALNUT STREET.

CHOLECYSTECTOMY: WITH A REPORT OF TWENTY-SEVEN CASES.

By JOHN F. ERDMANN, M. D.,

NEW YORK.

That one can exist without a functioning gall-bladder is a well known fact; proved many times by the autopsy and operating table findings. In many gallbladders the cystic duct is occluded by stone, exudate, kink, etc., so that the storehouse function of this viscus has not been carried on for months or years. Given this as a fact when one has a case of cholecystitis, or disease of the gall-bladder in which time as a curative agent cannot be relied upon, or when the condition is a menace to life, our judgment should demand the removal of the organ.

Cholecystectomy has been, and is yet considered by many, an operation of choice only when marked gangrene, or malignancy of the bladder is present. Personally, I am not in accord with these views, and have not selected my cases for the operation by limiting myself to these two conditions.

I shall consider the primary operation in this paper, and report results in twenty-seven cholecys-

tectomies, complicated or not with other diseases and conditions (two patients pregnant), and draw attention to the fact that no waiting time for subsidence of infection, etc., was given any of these cases by doing a previous cholecystotomy, nor was local treatment advised; and also call attention to the fact that the worst cases of infection and most active invasions did fully as well, if not better, than those of lesser, or practically no inflammatory activity.

The argument that it is not good surgery to do a cholecystectomy during an active invasion, is not supported by the results in my series of cases. I am a firm believer that active interference in these cases by complete removal is as good practice as appendectomy is now considered.

The time of repair and convalescence is shortened very markedly when cholecystectomy has been done, as compared to that of cholecystotomy. The possibility of secondary operation when cholecystotomy has been done is great, while following cholecystectomy it is rare.

The question of the length of the incision in the radical operation has never been of sufficient import to cause me for a moment to select cholecystotomy, as usually an incision of from four to seven inches, depending upon the thickness of the fat cushion, will be ample; and the danger of hernia in a split rectus incision, as always practiced by me, is extremely remote.

It is rather astounding when one studies the field of advancement in surgery of the appendix that radical surgery of the gallbladder should be no further advanced. Emphasis is furthermore given the above statement, when we remember that the first complete removal of the gallbladder was done twenty-three years ago, thereby antedating appendix work by years.

The question of drainage of the hepatic system, when a cholecystectomy has been done or is contemplated, should not, barring an inflammatory condition such as one would even at the present date in surgery of the appendix have great respect for, prevent the performance of both the removal of the gallbladder and drainage of the duct or ducts. In fact, the purchase one can obtain on the gallbladder in doing the radical operation, will aid and assist greatly in the finding of the common duct; this at least has been so in my experience. One can readily follow the tense cystic duct as a guide to the common duct, when the gallbladder is gently pulled upon.

My first cholecystectomy was performed for a gallbladder filled with stones, no bile whatever being present; and complicated with stones in the common and hepatic ducts. In this case, as the gallbladder was being freed it was used as a tractor, the ducts brought into view and the cystic duct tied off, its proximal end having previously been anchored with a loop suture. Traction was then made by means of this suture; the cystic, common and hepatic ducts split, and quite a number of stones removed. Afterwards three or four stitches were taken in the hepatics, and one in the common, leaving ample opening in the common for drainage. Recovery followed rapidly, the patient having been dismissed without any fistula or sinus, at the end of three and a half weeks. It was rather an interesting fact (and for a few days an anxious time

was spent by me) that almost a year afterwards the patient passed through one attack of moderately severe pain, since which time no recurrence of pain has been noted.

Twenty-two of the twenty-seven patients were females, the youngest being twenty-seven, the eldest sixty-six. Four of the entire number were over fifty years of age. One was a male twenty-seven years old. One gives a history of attacks from her tenth year, and one from her twelfth year. Five had histories of previous typhoid, about twenty per cent. of this series. In thirteen, no history of typhoid was obtainable, and nine gave a negative history of typhoid. It is more than possible that by closer questioning of the family and ability to converse with the patients in their own language, a larger proportion of typhoid would be in evidence.

Two deaths occurred in this series, both in non-suppurative, but not in uncomplicated cases. One, a male twenty-seven, cholelithiasis, with thirty-three stones in a distended and elongated bladder, containing typhoid bacilli in the bile, complicated with a diseased appendix containing eleven concretions. The first died from exhaustion in eight days, and was one in which it was necessary to do a choledochotomy for numerous stones in the common and hepatic ducts; occurring in a female forty years old, a long suffering patient whose condition was far below par. I did not see this patient after the operation.

The second death was in a male (see history presented), who vomited black matter after the operation, from the moment he was placed on the cart in the operating room. A control case of this type of unfortunate result occurred, in which I did a cholecystotomy and appendectomy, in a male twenty-seven years old, with no stones, but a bladder distended with inspissated gall, pericholecystic adhesions and an acute appendix. These cases belong to the type of deaths described by the late Dr. Fowler, of Brooklyn, in a paper entitled *Vomito Negro*, read before the Surgical Society about three years ago.

Two pregnancies occurred, one five months, miscarried in twelve hours after the operation. She had a gallbladder nine and one half inches long, a single stone weighing five hundred and fifty-five grains, and had had a temperature from $99\frac{1}{2}^{\circ}$ to 104° , for over a week previous to the operation. The other, who was in her seventh week, submitted to an operation of election for cholelithiasis and appendectomy, without aborting.

The appendix was removed in sixteen out of the twenty-seven cases, in several instances being markedly invaded. Eight had gangrene of one or more coats of the bladder. One was doubly perforated, contained two stones and a large abscess well walled off. In five cases, the common and hepatic, or both ducts were opened for stones. Although history of jaundice was obtained in twelve cases, the jaundice in the remaining seven is to be explained by the fact that stones were passed through the common duct before the operation in some of them, while in two or three, pressure of exudate and distended bladder could be ascribed as the factor productive of jaundice. Twenty-two were for acute inflammatory conditions, all recovered. One was for a case of hydrops due to a large stone in the

cystic duct, with another free in the bladder. One was done for a primary typhoidal perforation in the beginning of the sixth week of the disease, or rather the first week of her convalescence.

The position of the gallbladder was anywhere under the right rectus, from the normal site, to that of a line drawn from anterior to anterior superior spine of the ilium. In fact, in two cases the masses were supposed by the family physicians to be appendicular. The gallbladders varied in size from two to nine and a half inches in length, and one was four inches wide at the fundus. Marked adhesions were present in twenty-two, and slight in three; in two, none were present. Stones were present in all except one; this case was one with a marked history of cholelithiasis, but only profound adhesions were found, with sharp angulations of the bladder.

Indications: Perforations by trauma; ulceration other than due to abscess or gangrene (see case of typhoidal perforation); obliteration, or stricture of the cystic duct; chronic cholecystitis with thickened walls; atrophy; gangrene; acute suppuration; enlargement by dilatation; these latter are usually due to either calculus obstructions, strictures or angulations of the bladder, etc.; marked adhesions; hour-glass contractions; chronic or recurring cholecystitis, or cholelithiasis and malignancy.

Contraindications: Apparently healthy bladder in cholelithiasis and pericholecystitis; perforations into other viscera, when difficulty of closure of the anastomosis is great; perforations in the suppurative variety when adhesions are extensive, and where life would be jeopardized by such radical interference; malignancy when extensive, and those cases where hurried operation is indicated to save life.

The incision is made through the right rectus, either its middle or about the junction of the outer and middle thirds. After incising the posterior portion of the rectus sheath and the peritonæum, search is made either by finger or eye for the bladder. Should there be evidence of adhesions, these are rapidly broken up and the bladder surrounded by compresses, to protect the surrounding viscera from contamination. When all adhesions are free, the bladder is either drained by aspiration, or incision and then removed; or it is removed without emptying. The peritonæum is split on either side of the bladder about three quarters of an inch from the liver, the fibrous tissue cut or torn through, and the bladder liberated from its attachment to the liver structure in the cystic fissure. I have found that in the majority of patients the removal is more readily accomplished by first liberating the cystic duct and cutting it, then releasing the bladder from below upwards, or by a combination of both of these methods.

When one approaches the duct in the first method, numerous branches of the cystic artery are met with. These by bleeding increase the time of operating, as well as mask the field with blood; while in the second method the cystic artery is tied off, or clamped in its proximal portion, and little or no hæmorrhage is experienced. When the duct is liberated, it is either grasped in an artery clamp or ligated, or a loop suture or two are placed in its proximal portion with a view to act as a tractor

upon it, for further work upon the ducts, if desired. Previous to the exposure of the bladder, a sand pillow can be placed under the dorsal region, or else the table of Lilienthal, etc., is used, in which there is a raising rest useful for both liver and kidney surgery. This sand pillow or rest is dispensed with when the bladder and duct work is finished, i. e., just previous to completing the toilet of this region.

I have never lost any time in trying to accurately approximate the peritoneal flaps over the cystic fissure, in the cases requiring drainage, but have relied upon adhesions and union taking place from pressure, exercised by means of the drain, so placed that it comes in contact with the partially apposed (by sutures) peritoneal flaps. The artery is usually found in a position internal, and toward the epigastric apex, and with a tendency to a position slightly posterior to the duct.

I invariably palpate the common and hepatic duct, between the thumb and index and middle fingers, if a patent foramen of Winslow exists. Should none exist, palpation over the course usually taken by the duct is made by the index finger. It is a very simple matter in most of these cases, especially so if a stone be found in the common duct, to incise the common or hepatic duct, and quite so to split the stump of the cystic to the common, and to follow it and the hepatic. The stump is disposed of, if no drainage be used, by ligating with catgut or silk, and touching its exposed edges with pure carbolic. When the duct has been disposed of, a cigarette drain is placed in the well, formed by the absence of the gallbladder, and the incision closed to the site of the drain. The drain is removed in from three to seven days, i. e., as soon as the newly formed plastic exudate is sufficiently broken down to allow of the removal without a great deal of traction. The after treatment in these cases is practically the same as in cases of appendectomy.

Should no infection of the exterior of the bladder be evident, it has been my habit recently to sew up the abdominal wound without drain. I have removed the appendix in all cases where the condition of the patient would allow of five minutes longer interference, provided the immediate tissues surrounding the gallbladder were not in a marked inflammatory state. In one instance, an appendix with eleven concretions was removed; in another, a large single concretion was found; in another the appendix was bordering on a perforation; and in thirteen others, sufficient disease manifestations were present to demand the removal at the same sitting. No additional argument need be offered to the now well known fact, that these two organs bear a peculiar relationship to each other in disease.

CASE I.—Pericholecystitis; angulations of the gallbladder; chronic appendicitis. Female, thirty-four years of age, unmarried; had been a sufferer for two years, with a symptom complex of sufficient stomachevidence to cause us to make a diagnosis of stenosis, probably due to an old ulcer; and chronic appendicitis. The following history was obtained from her on March 7, 1905: There had been a loss of weight of twenty-five pounds in two years. She had a pain in her right side, low down, two years ago; this continued intermittently for about one year. "Everything she ate seemed to turn to gas." There was occasional pain in the right lumbar region. Later pain was evident in the epigas-

tric region, this latter pain being induced by eating, and following closely after the ingestion of food. She passed mucus and bloody stools a number of times, and beef has been vomited almost intact ten hours after eating. She feels "bloated." Her weight is one hundred and a half pounds in heavy, winter street costume.

Examination.—No analysis of stomach contents was made. The patient is extremely thin and sparsely built. Painful to pressure in epigastric region. There is no kidney prolapse, the stomach is somewhat dilated with slight prolapse. No marked pain in McBurney's region.

Operation was done within a week of her first visit. A four inch median incision disclosed a very long, distended gallbladder, extending two and a half inches below the liver border, and sharply flexed by adhesions to the stomach and duodenum toward the left; stomach and duodenal orifice negative. The adhesions were released, no stones palpated, and the gallbladder was removed. The appendix, about six and a half inches long, very much thickened and congested, was readily reached through the incision and removed. The abdomen was closed without drain. The gallbladder was filled with inspissated bile; no culture was taken.

On July 15th the patient has gained over fifteen pounds in weight, and has lost all previous symptoms. She has eaten practically any kind of food until this siege of heat.

CASE II.—Cholelithiasis, pregnancy, etc. Mrs. M., thirty-two years old, came to me on May 11, 1905, giving a clear history of gallbladder trouble, easily defined as due to stones. She has pain in the epigastric space, in back, and under right shoulder; the attacks are frequent, and requiring anodyne; she never fails to become slightly jaundiced during and following these attacks of pain. She gives no history of pregnancy; the stomach symptoms are complex, that of a fermentative gastritis.

She accepted the proposition for an operation, which was done about ten days later. At this time she confessed to being pregnant, six to eight weeks. Right rectus incision was made, the appendix easily delivered through a five inch incision, and found to be thickened in all coats and containing an entolith three quarters of an inch long. The gallbladder was nine inches long, with but few adhesions, and containing quite a few stones. It was removed. The abdomen was then closed without drain. Patient recovered without aborting, and visited me in my office at the end of the third week.

CASE III.—Cholelithiasis; sharp flexion of the gallbladder and appendix. Mrs. G., forty-five years old, came to me through the courtesy of Dr. Berlein, on the thirteenth day of April, 1905. Her pain dates only during a period of five months, and is located in the centre of the epigastric space. She has vomited green material, mucus, and contents of stomach very many times, is constipated, but never jaundiced. She has lost a few pounds in weight, never passed or vomited blood; but cannot take any food but a cracker and milk, as ingestion of other foods are productive of pain and vomiting within a period of half an hour. There was never a typical gallstone colic. Patient was seen by a number of physicians, and ulcer of the stomach was diagnosed. The stomach contents, the blood, and the urine were all negative upon examination.

Examination.—There is pain on pressure in the region of the pyloric orifice, but none in the typical gallbladder or duct region; the bladder is not palpable; the stomach is dilated to a moderate degree; succussion sound is found over quite an area.

Operation.—Right rectus incision; the stomach and pylorus were examined, with negative result. The gallbladder presents a peculiar sickle curvature, well marked, and held by a dense band of adhesions to the duodenum; concavity toward the duodenum. There

were found some few small stones and grit in the bladder. The appendix was found to have the same peculiar conformation. Both these organs were excised, the abdomen being closed without drain. Patient reported in my office in her fourth postoperative week.

CASE IV.—Cholecystitis and appendicitis; death. The patient was a male, about twenty-eight years old; ambulance driver. He had had typhoid fever in Cuba during the war, i. e., three years before I operated upon him. He also had had two attacks of gallstone colic, and some vague appendicular trouble. When seen by me he was convalescing from an attack of cholecystitis.

Operation.—A distended, abnormally elongated gallbladder, with thirty-three mulberry stones was found; the appendix was about six inches long, containing eleven concretions; both were removed, the operation lasting thirty-five minutes. The bile contained typhoid bacilli only.

Patient vomited bloody or black vomit just as he was placed upon the cart to remove him to the ward. This vomiting proved incessant and uncontrollable, assuming at times an almost entirely biliary nature, but invariably accompanied with decomposed or disintegrated blood. He never had any tympanites nor elevation of temperature. The pulse gradually becoming rapid and feeble, death occurred on the third day.

A control case (using the term control only in relation to the two operations, in cases of allied conditions), was that of a young tailor, twenty-seven or twenty-eight, with a cholecystotomy and appendectomy, the appendix being highly inflamed, who died in the same manner and in about the same time.

CASE V.—Cholecystitis. Mrs. M., age forty-two, came to my care through the kindness of Dr. Titus Bull, in the fall of 1904. Her history was an absolutely perfect one of cholelithiasis, previous to the present attack, dating back to her tenth year, the attacks of pain increasing yearly in frequency and intensity, so that during the few months previous to her visit, they were expected every few days.

The present attack is marked by a distinctly large and tender gallbladder, almost on a level with the umbilicus. The temperature was gradually increasing, indicating purulent invasion.

Operation was performed the following day in her house, and lasted for thirty-five minutes. There was found large hypertrophied bladder walls, a half inch thick; the mucosa was gangrenous; the contents were pus and seventy-five gallstones of good size, and of ebony black color. A small drain of rubber tissue and gauze was inserted for four days. The patient was about in eighteen days.

CASE VI.—Cholecystitis, etc.; cholecystotomy. Three months later, multiple fistula; profound icterus; cholecystotomy; choledochotomy; repair of gastric fistula; recovery.

Miss S., age thirty-four, suffered pain of gallbladder variety since the age of twelve. She has had a continuous fever (typhoid?) two or three years ago. In January, 1904, she had a cholecystitis with some jaundice, but an operation was not performed. During February, 1905, she had sharp attacks of pain of typical gallstone character, about every second week. In June, she had attacks more frequently, and a very profound attack of jaundice, which lasted for some time.

She was operated upon on June 5th, a cholecystotomy being done, at which time four stones were removed through an incision one half inch beyond the outer border of the right rectus. No adhesions were found; so I'm told by the assistant to the operator, who is now dead. Patient did well for a period of two weeks, when her biliary drainage sinus began to discharge clear mucus. This continued, with attacks of pain in back and shoulder, until September 16th, when a large swelling appeared under the old scar, accom-

panied by chill and jaundice. This tumor disappeared by a very free evacuation of pus, bile, and mucus through the abdominal sinus, and by a new opening at the lower angle of the scar.

Examination showed an emaciated patient of deeply jaundiced appearance, with a four inch scar to the outside of the right rectus; a sinus at each angle, discharging a mucus like fluid, slightly stained with bile.

Upon operating, the fistulæ were found leading toward what was supposed to be the gallbladder; but upon opening the abdomen one of these was found to enter the stomach within a half inch of the pylorus, through an opening large enough to admit a silver quarter; the other led to the gallbladder. The stomach, etc., was dissected away from the gallbladder, and upon palpating its interior with the finger, a large gallstone was removed. The finger then palpating the interior of the duodenum, came in contact with a small stone, which was removed. The hole in the stomach was closed by a three tier suture. The gallbladder was then further released from its adhesions, and a large stone was found in the cystic duct; and a large stone, the size of a filbert, was found in the common, at its formation by the hepatic and cystic. The bladder was removed, the common duct entered by splitting the cystic and following it; a drainage placed in the common and the abdomen closed.

The tube was removed in eight days, and the patient discharged to her country home on the twenty-eighth day.

In conclusion I wish to say that the operation is advocated for its simplicity; diminution of post operative convalescence; elimination of secondary operation; and that it dispenses with a viscus, dangerous to the owner when once infected; that I do not advise this operation in all cases, as before stated; but that riper judgment, as is now exhibited in appendix surgery, should be exercised in this branch of surgery.

60 WEST FIFTY-SECOND STREET.

SOME DIFFICULTIES OF DIAGNOSIS AND OPERATION IN DISEASES OF THE BILIARY TRACT.

By W. P. CARR, M. D.,

WASHINGTON, D. C.,

PROFESSOR OF CLINICAL SURGERY, GEORGE WASHINGTON UNIVERSITY.

Several papers have recently appeared in the various medical journals urging early diagnosis and operation for gallstones and other affections of the biliary passages. None of them, however, give very definite or reliable instructions for making the early diagnosis.

As a matter of fact gallstones give rise to no symptoms, and cannot be detected until they either pass into the bile ducts or cause inflammation of the gallbladder. And in many cases it is doubtful whether the stones are the cause or the result of the cholecystitis. When gallstones pass into the ducts the diagnosis is usually easy, as they give rise to attacks of biliary colic, the symptoms of which are well known and sufficiently diagnostic. Unfortunately, however, many patients come to us with histories so unreliable as to be useless or worse.

To be of any value a history of biliary colic must be given by a reliable physician who has actually seen the patient in one or more attacks, or by some person of known intelligence and honesty. Other-

wise, the diagnosis had better be deferred until reliable observation can be made.

When cholecystitis is present in early cases with no obstruction of the bile ducts, there are but two symptoms of diagnostic value and usually no physical signs at all. The two symptoms are pain and tenderness in the region of the gallbladder. Tenderness on pressure is of more value than pain. But well marked pain and tenderness in the region of the gallbladder makes a diagnosis of cholecystitis or cholelithiasis reasonably certain if we exclude disease of the stomach, pancreas, liver, pleura, kidney and appendix, and superficial inflammation of the abdominal wall or ribs. The early diagnosis is to be made largely, therefore, by careful examinations and exclusion of disease of other organs, some value being given to the rarity or frequency of the disease in case of doubt. Diseases of the stomach that cause pain and tenderness in the right hypochondrium are ulcer, cancer, pyloric obstruction, painful catarrhs, and colic or gastralgia. Careful examination of the stomach and of the stomach contents after a test meal should exclude all these affections except simple colic and gastralgia.

In colic the pain is not persistent and the tenderness ceases when the pain is relieved. Gastralgia is also intermittent and more likely to be mistaken for biliary colic than for cholecystitis. In gastralgia, pressure often gives relief instead of pain.

When, as sometimes happens, the pain and tenderness of an inflamed gallbladder is situated lower than usual, movable kidney, renal calculus or other painful disease of the kidney may be suspected, but careful palpation and examination of the urine should exclude an affection of this organ.

The pain and tenderness in appendicitis is sometimes located so high and the tenderness from gallstones so low that these diseases may be confounded. Gallstones and chronic appendicitis frequently co-exist. I have seen several cases where the tender point was located about half way between the appendix and the gallbladder, and in one of these cases I found gallstones, appendicitis and movable kidney. It may be impossible in such cases to make a positive diagnosis, but this is not of great importance as the treatment is operative in either case. In all such cases, however, when the abdomen is opened both gallbladder and appendix should be examined.

Pleurisy may usually be eliminated by examination of the chest, and inflammations of the ribs or abdominal wall are usually accompanied by local redness or œdema.

The only disease of the liver likely to cause pain in this region is abscess. This is accompanied by fever and greater tenderness than is usually found in cholecystitis. Cysts and tumors of the liver do not usually cause pain until large enough to be palpated.

Chronic pancreatitis is frequently due to gallstones and it may not be possible to distinguish between disease of the gallbladder and disease of the pancreas. But here again the distinction before operating is not important.

In short, it may be said that it is important to distinguish disease of the gallbladder from disease of the stomach, kidney, pleura or abdominal parietes, and this can usually be done. But from certain diseases of the pancreas, liver, or appendix it may be impossible to make a differential diagnosis before

operating. In these cases fortunately the distinction is not important, provided the operator is prepared to meet whatever condition may exist.

The greatest difficulty in diagnosis comes from the coexistence of disease in two or more of the organs above mentioned. Cholecystitis and pancreatitis are frequently associated, as are cholelithiasis with chronic appendicitis or cancer of the gallbladder. Gastrointestinal catarrh is a frequent accompaniment of all disease in the region of the gallbladder and appendix and may add greatly to the difficulty of diagnosis. One case of suspected gallstones that I had under observation at intervals for several years is of interest in this connection.

The patient was a lady, about 55 years old, who for several years had suffered from severe attacks of pain in the right hypochondrial region. These attacks came at intervals varying from one to six months, and lasted from a few days to several weeks. They were accompanied by great prostration, nausea, and vomiting. She had been given large doses of morphine and inhalations of chloroform for the relief of the pain. When I first saw her, she had been given two or three grains of morphine hypodermically, and inhaled about a pint of chloroform daily for three or four days.

Chloroform was stopped and morphine cut down and she soon recovered from the acute attack. She then complained greatly of soreness and boring pain in the right hypochondriac region. I had her examined by a stomach specialist who pronounced her trouble achylia gastrica. She improved very much under his treatment, and went home thinking herself well on the road to recovery. In a few months the attacks recurred worse than ever. I became convinced that she had gallstones, and after much difficulty persuaded her to go to a hospital for operation.

I then discovered for the first time that she had been taking morphine every day for ten years, and for the last two or three years never less than five grains a day hypodermically. This fact had been carefully concealed from me and from her other physicians by herself and by her large and apparently intelligent and honest family, and I should probably never have discovered it had not one of her sisters attempted to give her hypodermic injections in the hospital. After much difficulty I succeeded in getting her to stop the morphine. She promptly recovered, and has had no pain for nearly a year. I have no doubt that she had real pain, but it was caused by morphine.

In uncomplicated cases, cholelithiasis or cholecystitis may usually be recognized by careful examination and exclusion of other diseases. But when one or more of the diseases to be excluded coexist with the gallbladder affection, then the diagnosis becomes difficult or impossible. And these diseases frequently are associated with disease of the gallbladder.

Jaundice does not occur unless there is obstruction of one of the hepatic ducts or of the common duct, and it is not to be looked for as an early symptom. It is present in only about 10 per cent. of all cases of gallstone.

It is apparent, therefore, that an early diagnosis of gallbladder disease is to be made only by very careful examination and that in cases complicated by gastrointestinal disorders, obesity, pancreatitis, etc., it may be impossible to make it with certainty. When jaundice is present in any marked degree, bile will be found in the urine, and this distinguishes it at once from any form of hæmatogenous jaundice. But in advanced cancer of the biliary region both

hæmatogenous and heptogenous jaundice may be present.

Jaundice of hepatic origin coupled with pain and tenderness in the right hypochondrium point conclusively to obstruction of the common bile duct, but it may be impossible to say whether the obstruction is due to stone, to cancer, to benign tumors, to chronic pancreatitis, to simple flexure, or to swelling of the duct.

Unfortunately even after opening the abdomen it is not always possible to tell the cause of the obstruction. The greatest difficulty that I have encountered in operating upon the biliary tract is, first, the positive determination of the cause of obstruction and, secondly, making sure that the cause is removed and the common duct patulous.

I will briefly relate a few cases that illustrate this difficulty better than I can do it in any other way.

CASE I.—Powerfully built white man, about 35 years of age. He was convalescent from typhoid fever, but fever had recurred, which had lasted two months when I saw him. There was tenderness and distention in region of gallbladder. Upon opening the abdomen, the gallbladder was found distended with a quart of dark bile. The cystic duct was patulous, the common duct obstructed, but no stone or other cause of obstruction could be found. The gallbladder was drained and the patient made a good and permanent recovery. I believe that in this case cholecystitis of typhoid origin caused swelling of the common duct, and that the gallbladder as it distended caused a sharp flexion of the common duct and an obstruction that was permanent until relieved by draining the distended bladder. But at the time of operation, I was unable to find any cause. The pressure in the gallbladder was too great to be held by simple swelling.

CASE II.—Well developed, previously healthy white man, about 40 years old. His history was almost identical with case I: typhoid fever, convalescence, recurrence of fever, pain and tenderness in right hypochondrium. Apparently the same condition was found on operating. The gallbladder was distended with a quart of dark bile under great pressure. The cystic duct patulous, the common duct evidently obstructed, but no cause could be found. The gallbladder was drained as in the previous case. Bile continued to flow freely from wound for seven weeks. There was no evidence of bile in the stools. At this time the wound was reopened and a careful search was made for any obstruction. Slight thickening of the head of the pancreas and an enlarged lymph gland beside the duct were all that could be found. I attempted to probe the common duct with a flexible lead probe, but was unable to pass it into the duodenum. (I have since attempted repeatedly to pass such a probe upon the cadaver, but never successfully.) Cholecystenterostomy was done with a small Murphy button. The patient improved for two weeks, bile appeared in the stools and the wound closed. He grew weaker, however, and died seven weeks after the second operation. At the autopsy, thickening of the head of the pancreas was found obstructing the duct just as it entered the duodenum. The pancreas and bile duct were examined by Dr. James Carroll, who thought it a syphilitic cirrhosis of the pancreas. There was also found what appeared to be a gumma on the upper surface of the liver, though there was no history or other evidence of syphilis.

CASE III.—Patient was a well developed white man, about 40 years old. An abscess of the liver was suspected. The gallbladder was found to be enormously distended with bile and pus, but an abscess of the liver was not found. After opening the gallbladder, bile flowed freely into it showing the cystic duct to be open.

No stone or other obstruction of the common duct could be detected. The common duct, however, was obstructed, as bile continued to flow through the wound at a tremendous rate for ten weeks. The patient's fever subsided after the operation, but he grew daily weaker and died about ten weeks after operation. Autopsy showed a small cancer of the head of the pancreas. This was not distinguishable at the time of operation.

These three cases were all well developed men about the same age. All had distended gallbladders and in none of them could I determine the cause of obstruction at the time of operation, nor could I determine whether the common duct was open or not. Yet the cause of obstruction was different in each case.

CASE IV.—The patient, a white woman, about 50 years old, had had attacks of biliary colic at intervals for several years. When I saw her, she was extremely weak and emaciated and deeply jaundiced, being of dark mahogany color. The liver extended below the umbilicus, felt hard and the edge irregular. The distended gallbladder could be distinctly seen through the emaciated abdominal wall, looking like an orange under the skin. My diagnosis was cancer of the liver in an advanced stage. She complained bitterly of itching and I concluded to drain the gallbladder to relieve her of the jaundice and consequent itching. When the gallbladder was opened a stream of coffee colored fluid spouted out, two feet high, showing the great pressure it was under. At least a quart of this fluid poured out, followed by two or three ounces of milky fluid, and then bile began to flow copiously. To my surprise the liver began to shrink and soften as the bile poured out, and before I had finished operating it had gone down to nearly its normal size. There was no cancer. Here again I searched carefully for obstruction of the common duct, but could find none. There was a partial obstruction, however, as was shown later. Bile continued to flow from the wound for two months, and then at a diminished rate for three months more. Some bile appeared in the stools. The woman improved remarkably in strength, her jaundice disappeared, she returned home and did her own housework, cooking and washing for three months, though bile continued to flow through the wound, which was now no larger than a pin hole. Finally to prevent this annoying discharge I took her back to the hospital and performed a cholecystenterostomy with a Murphy button. She made a good recovery, and went home in good health and spirits. But about a month later a small opening appeared in the scar and bile began to flow freely again. Passing a probe into this opening, I detected the Murphy button still in the gallbladder. Under cocaine anæsthesia I enlarged the opening and removed the button which had not become loose, but was choked up with cholesterol crystals, until it was impervious. Bile and fecal matter discharged freely through the wound for some time, but the woman continued doing her own work, changing her dressing several times a day. The wound finally closed and she is now in good condition. At the second operation I again endeavored to find the cause of obstruction, but was unable to do so.

These cases are a strong argument against the removal of the gallbladder unless there are positive indications for its excision. In cases of obstructed common duct where the obstruction cannot be detected and removed, the gallbladder becomes invaluable as a means of draining the bile into the intestines.

I am still unable to say what is the cause of obstruction in the last case. I am quite sure it is not stone as there was no stone in the gallbladder and

with a finger in the foramen of Winslow I was able to palpate the common duct down to the head of the pancreas. Cancer was not present, as evidenced by the patient's present good condition, and no other abnormal condition could be detected.

Many surgeons I know claim to be able to palpate the common bile duct and determine the presence or absence of stone in it. But the last 0.75 inch of the common duct with the ampulla Vater is embedded behind the pancreas in most cases in such a way as to make it impossible to palpate it with any degree of certainty. And I have several times known excellent surgeons to overlook stone in this situation. One surgeon of large experience in this work who assured me a few months ago that he had no difficulty in detecting stone in the common duct recently operated upon a lady in Washington for gallstones. A few days after the operation several stones were passed through the wound. And as soon as the wound closed, jaundice and symptoms of obstruction of the common duct reappeared. Halsted has reported a number of extremely interesting cases in which he was unable to assure himself of the patency of the common duct. In one or more of these cases he opened the duodenum and probed the duct from below in order to be sure that it was unobstructed. Other forms of obstruction may be more difficult to detect than stone.

I have made numerous experiments upon fresh cadavers at autopsy to determine the patency of the common bile duct and I do not believe it is possible to be sure of it without opening the duodenum. And this was in subjects that had no disease of the biliary tract.

I have found it usually impossible to pass any sort of probe through the gallbladder, cystic and common ducts into the duodenum. I have tried injecting fluid into the gallbladder, but this method is useless for two reasons. Fluid will pass from the cystic duct into the hepatic ducts and up into the liver quite freely and on the other hand will not pass through the common duct even when it is normal.

The lesson to be learned from these facts is that we cannot be certain of the patency of the common bile duct. Excision of the gallbladder under such circumstances would be unfortunate and perhaps fatal unless drainage of the common duct were provided for at the time.

Even if the common duct is open at the time of the operation it may become obstructed at some future time in such a way that the obstruction cannot be removed and the gallbladder will then be of great value for draining the bile into the intestine.

In my opinion it is only when there is malignant disease of the gallbladder or at least a suspicion of malignant disease that cholecystectomy is justifiable.

1418 L STREET.

The Return of the Russian Army Surgeons from the Seat of War.—The *Petersburger medizinische Wochenschrift* thinks that the return of the surgeons employed in the Russian army at the seat of war is still a remote hope. Active military surgeons and surgeons of the reserve are employed in great numbers in the hospitals of Korea, Manchuria, and Asiatic Russia. The first troops will not return before spring, and the hospitals may not close before two years. The last surgeons returned to Russia after the Russo-Turkish war from the field of operation about one and one half years after the signing of the declaration of peace.

THE DEFINITION OF INSANITY.

By WILLIAM A. WHITE, M. D.,

WASHINGTON, D. C.,

SUPERINTENDENT, GOVERNMENT HOSPITAL FOR THE INSANE;
PROFESSOR, NERVOUS AND MENTAL DISEASES,
GEORGETOWN UNIVERSITY, ETC.

In discussing any subject, especially if there be some question as to its nature, it is natural that the first consideration should be given to defining it. A definition to be a perfect one should include everything that the term defined is applicable to and exclude everything to which the term is not applicable. Innumerable attempts to frame a definition of insanity have been made by eminent alienists all over the world, but up to the present time it cannot be said that there is a satisfactory definition of insanity in existence, and after all it is not strange that this should be the state of affairs. Mind is a function of the highest nerve centres of the brain, and the brain is the most complex development of organic evolution. Our knowledge of this organ and its functions is being constantly enlarged and our ideas concerning it are constantly changing so, the best that can be expected of a definition at any time is an expression of what is believed to be the nature of insanity in accordance with the knowledge of that time, realizing that before long it will probably be replaced by a better one.

In order that we may approach our problem from the proper direction and with the correct point of view and also in order that we may make our definition as specific as the known facts warrant we must first have a clear conception of the mental processes disorder of which may constitute insanity. This can best be accomplished by a short description which will orient them in relation to each other and in relation to the mind as a whole.

The body is made up of a great number of organs, each one of which has a definite function. The kidney to secrete urine, the lungs to carry on respiration, the heart to force blood through the vessels, the stomach and intestines to digest and absorb nutrient. Definite as is the function of each one of these organs its action must be timed in response to certain conditions and in relation to the other organs of the body or it does not serve its purpose in the individual economy. The stomach must secrete its juices when food is introduced, the bladder contract when there is urine to be expelled, the active brain must be supplied with an increased amount of blood, the kidneys and the skin must act harmoniously together to excrete certain substances, the respirations increase on physical exertion, and so on indefinitely. Now it is the duty of the nervous system to see that the functions of the several organs are rightly timed and properly adjusted in relation to one another. This is the function of the lower nerve centres.

The highest nerve centres of the cerebral cortex that constitute the physical substrate of mind have quite a different function. Their duty is to regulate and control the actions of the individual, so as to best serve his interests in his relations with his environment.

In order to do this the mind must obtain knowledge of the environment through the sense organs, assimilate this knowledge, and then initiate actions

in accordance with it. To illustrate: A man standing in the middle of the street sees a runaway team dashing towards him. His sense organs take the information to his mind of the presence of the runaway team, its distance from him, the distance of the sidewalk from where he stands, and many other things. His mind assimilates all these facts and by a process of reasoning he reaches the conclusion that safety lies in his immediately gaining the sidewalk which is in front of him. The necessary volitional processes are initiated and thus the actions of the individual are so related to the conditions in his environment as to conserve his best interests: in this case to save his life.

In order that the adjustment of the individual to his environment could take place three things were necessary: 1. A knowledge of the environment must be gained. 2. This knowledge must be associated and brought into relation with previous experiences. 3. It must be transformed into the appropriate actions. The sensorium subserves the first of these functions, the intellect the second, and the motorium the third. The function of the sensorium is perception, of the intellect thinking, and of the motorium volition.

With this broad view of the function of consciousness to guide us we may now describe the separate processes more in detail.

As we have seen all our information of the environment must come through our sense organs, it follows of necessity that sensations play an important part in making up the content of consciousness. These sensations are the result of the stimulation of the sensory nerves, usually their terminals in the specialized end organs, and in the last analysis comprise the unanalyzable material out of which consciousness is composed much as the atom in the Daltonian conception of matter was supposed to be the unanalyzable unit which by combinations with others both similar and dissimilar went to form masses of matter as we know it. So the eye gives us sensations of light of different colors and intensities, the ear sensations of sound of varying qualities and loudness, and so on in each sensory realm, the sensations received being variable both qualitatively and quantitatively.

If we will stop and consider for a moment, however, we will see at once that these elemental sense experiences, like atoms, cannot exist alone and uncombined: That sensations of light, sound, pain, coldness, can never as such go to make up a conscious state. In front of me as I write is something which produces the sensation of a variously shaded, round patch of yellow, but even while looking at it I know much more of it than simply that it is a patch of yellow: I recognize it as an orange. What has been added to the visual sensations of roundness and yellowness to produce this result? Just this. Many times in the past have I had the same sort of sensations of roundness and yellowness impressed on my consciousness and many times in connection with these sensations have been others of touch, taste, smell and to their combination I have in the past given the name orange. So now when the sensations of roundness and yellowness are received and call up in consciousness those other sensations of touch, taste, and smell which have before occurred with them I recognize the combina-

tion as not a round patch of yellow, but an orange. To this process of forming an image in the mind of an object presented to the senses is given the name perception.

It is this process of perception which furnishes to the individual the knowledge of his environment which by association with the knowledge gained in the past leads to appropriate actions. This process of association is an association with ideas which may be said to be images of objects formed in the mind, but not presented to the senses at the time. The only difference then between percepts and ideas is the presence in the former of sensory elements.

This process of the relation of percept to ideas and the association of ideas one with another or in general terms this process of the assimilation and rearrangement of the materials of knowledge furnished by the senses with the materials already present in consciousness is the process of thinking. Now when from the association of two or more ideas there issues forth a new and different idea the process which produces this result is the process of reasoning and the new idea is known as a judgment.

Having received information of the environment by the process of perception and having assimilated the various percepts, reasoned regarding them and reached certain judgments, the next thing in the order of events is the initiating of appropriate actions. If the reasoning is at all complicated there are usually several judgments formed, each one of which may tend to express itself in an appropriate action. The strongest one finally, however, succeeding in expressing itself. This conflict of tendencies has been described as the "battle of motives" by Ziehen, who gives the following illustration:

"I see a rose in a strange garden (stimulus and sensation). A long series of ideas is aroused by the stimulus and the visual sensation of the flower (idea association). For instance, the memory of the rose's fragrance comes to mind, then I think how well it would look in my room, that it is the property of another, that plucking it would be punishable, and so on. Only after the whole series of presentations has passed before the mind does action follow, and whether I pluck the flower or go my way without it will depend upon the strength and intensity of the conquering idea."

The conscious realization in action of the strongest motive is the process of volition and is accompanied by a feeling of freedom to choose which motion shall dominate. The sum total of the actions of the individual is known as conduct.

All of these various processes which have been described must of course be conceived as taking place in conjunction with certain physiological processes in the cells and fibres of the highest nervous centres. These physiological processes, here as elsewhere, involve changes in the energy and the material substance of cells and fibres and so when a certain mental process has occurred once accompanied by its correlative physiological process the changes in nerve cells and fibres will have left such an impress that a subsequent process of this sort will occur more readily. In other words a mental process having once occurred tends to recur in the same way. This tendency is the physiological basis of memory which psychologically may be said to be

the recurrence to consciousness of a previous experience and the recognition of it as having occurred before.

All mental processes, besides the special qualities which characterize them, are accompanied by certain general conditions of consciousness known as feelings or affects which are pleasant or unpleasant, pleasurable or painful, agreeable or disagreeable, and like sensations are unanalyzable, elemental, constituents of consciousness. These pleasurable or painful conscious states arise as the result of the interaction between the individual and the environment and are known as feelings when this interaction is relatively simple and direct, i. e., a shrill whistle may be accompanied by a feeling that is disagreeable to the point of being actually painful. When the interaction is relatively more complex and indirect the resulting state of consciousness is known as an emotion, i. e., the bell of a locomotive and the hiss of an air brake are heard coupled with screams and cries of pain. The mind at once pictures to itself an accident and the emotion of fear arises in consciousness. If the interaction is still more complex sentiments arise such as honor, patriotism, etc.

I have gone into the description and definition of the mental processes largely to demonstrate their intimate interconnections, in fact that they are not separate and distinct in any sense, but only parts of a large whole. The old psychology conceived of mind as composed of a number of cubby holes in each one of which was pigeon-holed a special faculty, feeling, thinking, volition, each one of which was quite as distinct from the others as this illustration implies. Now, however, all that is changed. The "faculty concepts" ¹ are conceived of as what they really are, "class designations of certain departments of the inner experience" and not "forces, by whose means the various phenomena are produced." "Objectively, we can regard the individual mental processes only as inseparable elements of interconnected wholes." Mental processes, from their incidence in sensations to the release of the motor responses constituting conduct are conceived to have as their physical substrate a continuous neural process. The process, although differently named in different parts of its course for convenience of designation is a continuous one.

The word insanity is applied with reference to the mind, not with reference to the organ affected or the disturbance in that organ, whatever it may be. The word is used to denote a condition of the function mind and not of the organ brain. We may then start our definition by saying that insanity is a disorder of the mind. Mind, however, as we have already had reason to assume, must be conceived of as being the expression of a neural process, and a disorder of mind cannot be conceived of without postulating a disturbance in this neural process. If then, for the purpose of this definition, we use the word disease to indicate such a disturbance in the neural process, and the word brain to apply to the physical substrate of mind then we may amplify our definition by adding due to disease of the brain.

The use of the word disease here is, I am aware, somewhat broader than usual. It is, however, de-

¹ Wundt: *Principles of Physiological Psychology*.

sirable to make the wording of a definition simple, avoiding as far as possible explanatory or abstruse phrases. Disease ordinarily refers to a process producing tissue changes. While many of the forms of insanity are due to such a process in the brain there are others that present no demonstrable lesion or in fact are due to disease of some other organ. For instance, nephritis may cause uræmia, which in time may produce a psychosis due to the poisoning of the brain by the products of faulty tissue metabolism. Here the patient would hardly be thought of as suffering from a disease of the brain, but rather from a disease of the kidneys. The insanity is entirely a secondary affair. We cannot doubt, however, that there is a disturbance of the neural processes underlying the phenomena of mind. Quite likely these disturbances are too minute to result in demonstrable tissue changes, perhaps they may be chemical in nature, they are nevertheless as real as though they were on a larger scale and it seems to me that such alterations can properly come under the connotation of the word disease. Further than this the conception of insanity as due to disease of the brain is entirely in harmony with modern ideas of the relation of the mind to the brain and with modern brain pathology which is constantly narrowing the group of insanities without demonstrable changes in the brain.

To be more specific. Of what does this disorder consist? It must consist of disorders of some or all of the mental processes already described. The fundamental processes of mind disorder of which produces insanity are thinking, feeling, and acting. Disturbance of the process of receiving information from the environment cannot of itself constitute insanity.

The elementary materials of knowledge are brought in from the sense organs by the afferent nerves. Disturbances in the sense organs and nerves leading from them can therefore only result in a change in the character of this material brought to the mind and cannot in any way be symptoms of its disorder. Simple sensations, however, practically never occur without some element of perception and these simple perceptions stand at one end of a series, the other end of which is constituted of the most complex intellectual operations.

Although I have designated perception as the function of the sensorium yet this does not strictly conform to the facts in the case and was rendered necessary because of the limitations of language in an attempt to classify the mental processes in an easily intelligible way. As soon as one attempts to split things up in nature into distinct and clearly defined subdivisions we must compromise somewhere, because such clean cut divisions do not exist, but as in this case are constructed purely for convenience.

The process of perception as long as it was involved solely in associating present with past sensations might be said to be purely a function of the sensorium, but as was said above pure, elementary sensations practically never occur so that perception always involves association with previous mental states, feelings, ideas, and when as a result the round, yellow patch of color in front of me is perceived to be an orange such complicated mental

processes are involved as recognition, classifying, naming. The processes are all processes of assimilation, combination, and rearrangement of the materials of knowledge, and as such are functions of the intellect. It is for these reasons that disorders of perception are not included in the definition of insanity, for when they occur they involve disorders of thinking. The mind must be disordered before the materials of knowledge brought in from the sense organs by the afferent nerves can be so combined as to produce symptoms of insanity. The most characteristic disorders of perception, hallucinations, probably never occur primarily as evidence of mental disease, but only secondarily as a result of disorder of the central receiving apparatus.

Disorders of memory also cannot alone constitute insanity. These disorders are in the main disorders of impressibility and of retentiveness, but impressibility and retentiveness in reality are conditions of the physical substrate underlying the manifestations of memory. The mere fact that this nervous substrate is impressed more or less deeply and permanently by a process occurring within it does not in any way involve the nature of the special process under consideration. Thus disorder of memory by itself, quite contrary to the popular belief, cannot constitute insanity, although it is frequently found as an intimate part of the clinical picture.

Disturbances in the processes of thinking, feeling and acting we may expect to find in every case. In the old "pigeon-hole" psychology with its many "faculties" we might expect to find disorders of the most circumscribed kind. Now, however, we conceive the neural process underlying mind to be continuous. Any disturbance which produces insanity is a disturbance of this process, the process as a whole must suffer from a disturbance in any part of its course. Of course the amount of disturbance may be variously distributed so that the brunt may fall here or there, but feeling, thinking and acting may be expected all to show some trace of disorder if examined into carefully, although it may appear that only one is affected. For instance, paranoia was long thought to show only intellectual and perhaps volitional disturbance. We now know, however, that disturbances of feeling are among the most prominent of its early symptoms.

What is the nature of this disorder of thinking, feeling, and acting which constitutes insanity? The use of the word insanity presupposes the existence of a previous state of sanity. Now sanity may not by any means be a normal condition. There are all sorts of mental states of idiocy, idioimbecility, imbecility, and feeble mindedness that are far from normal, but they are conditions which for the individual in question are sane. In drawing a distinction between dementia and idiocy, Esquirol well said, "The demented man is deprived of the good that he formerly enjoyed; he is a rich man become poor; the idiot has always lived in misfortune and poverty." The idiot, the imbecile, the feeble minded lack something: the insane are suffering from a disorder of that which they possess. We thus may find all sorts of mental conditions which are sane for the individual, and as we have no normal standard of comparison for all people the best we can do is to compare the individual with his own normal standard, with his condition previous to the onset

of disorder; in other words with the state of mind that has been normal, habitual, usual with him.

Reviewing all the conclusions thus far reached adds to our definition so that it reads now: Insanity is a disorder of the mind due to disease of the brain manifesting itself by a more or less prolonged departure from the individual's usual manner of thinking, feeling, and acting.

Having indicated thus far in a general way, what insanity is; what it is due to; what the processes involved are; and the nature of their involvement, there remains but one further feature that I believe a definition of insanity should contain.

In my description of the functions of the brain I showed that in general the function of the brain is to subserve the adjustment of the individual to his environment. Of course in general such an adjustment constitutes life itself, which as defined by Spencer is "the continuous adjustment of internal relations to external relations." But whereas the lower nerve centres subserve the adjustment of the various organs with one another and with external conditions, the higher centres, the physical substrate of mind, subserve the adjustment of the individual as a whole to external conditions. It therefore follows that the most full and complete mental life is that which adjusts the individual most completely to the conditions of his environment: the best mind, that which is capable of the greatest latitude of adjustment, that enables the possessor to fill any position in life in which he may be placed. And conversely, the poor mind, the narrow mind permits only a limited adjustment, either limited in the particular position of life occupied by the individual or limited as to its possibilities of scope; or both. The mental life is carried on within relatively narrow limits.

Whatever may be the limits of adjustability for the individual any disorder of the mental processes must necessarily interfere with it. But as we have seen, in discussing the nature of this disorder that we had no absolute standard of comparison but were forced to compare the individual's present condition with his condition in the past, with his usual condition, so here all degrees of adjustability are found in different people and the most limited may, for the individual concerned, be normal. The interference with the adjustment of the individual with his environment is therefore a disorder in so far as it is a departure from his previous, his usual condition.

The completed definition of insanity would then read: *Insanity is a disorder of the mind due to disease of the brain manifesting itself by a more or less prolonged departure from the individual's usual manner of thinking, feeling, and acting and resulting in a lessened capacity for adaptation to the environment.*

As I have intimated all along a perfect definition of insanity is impossible because our knowledge of the subject to be defined is not complete. As our knowledge increases our ideas must constantly change and definitions can be but the crystallized product, as it were, of our ideas at any one time. We can see already how far we have advanced from the time of Esquirol, who emphasized in his definition that insanity was a cerebral affection "without fever."

Aside from these considerations we found that the definition had to be at best a compromise. To clearly define a subject, to put a fence about it, as it were, is impossible, when as a matter of fact that subject merges into the adjacent territory at all points. We found, for instance, that there was no standard of comparison that could be called sane, deviations from which constitute insanity, and again, even in the use of language difficulties arose and the word disease had to be broadened in its scope of application, while the term perception was seen to stand for a process so indefinite in its limitations as to result in serious embarrassment in its use.

The definition finally reached is, I fully realize, imperfect and at best a compromise and I am aware that it does not greatly differ, especially in parts, from definitions already in existence. I have endeavored, however, to make the wording of it somewhat more exact and its synthesis, I trust, may prove a suggestive review in a few words of the nature of insanity in the light of our present knowledge.

MEDICINE AT OXFORD, 1905.

By C. N. B. CAMAC, A. B., M. D.,

NEW YORK.

The suggestion to write an article on Oxford I comply with as there are two subjects upon which American medical readers would wish to be more fully informed, viz., Medicine at Oxford and the Rhodes Scholarships.

Gathering material for an article with Oxford as the subject resolves itself into the study of the most fascinating history of schools, institutions, and libraries of world wide reputation; of the biographies of divine and statesman, of martyr and rogue, who figure in the great religious and political epoch making moves of the world; of poets and prose writers who found in the cloisters and groves a nursery for their infant fancies; of ancient buildings crumbling from the breath of times and when

We who possess a spirit superior

Behold these which have none

Yet their inanimate lives will be

When ours is spun.

What of us lives, and why this toil

Why struggle and argue creeds?

Man's immortality lies

In principles and deeds.

Even the two subjects which I have singled out for inquiry have many charming bypaths of historical, literary, and biographical interest which I must resist.

MEDICINE AT OXFORD.—The most reliable source of information upon subjects connected with the schools is what is known as *The Statutes*. These are acts relating to the government of the university and are therefore clearly set forth with date, etc.

The University.—At the outset one must know that the university is a corporated body, invested with all the powers of a corporation in addition to which it has the following peculiar privileges:

I.—Jurisdiction civil and criminal over its members.

2.—Representation by two members in the House of Commons.

3.—Power of conferring degrees.

When one speaks of the university he refers to the colleges collectively.

The Colleges.—The university at present consists of twenty-one colleges, each with a separate building for teaching and accommodating its students. These colleges are chronologically:

Balliol	1260	Brasenose	1509
Merton	1264	Corpus Christi.....	1516
Worcester	1283	Christ Church.....	1524
Exeter	1314	Trinity	1554
Oriel	1326	Jesus	1571
Queens	1340	Wadham	1610
New College.....	1379	Pembroke	1624
Lincoln	1427	University	1634
St. Johns.....	1436	Hertford	1740
All Souls.....	1437	Keble	1871
Magdalen	1480		

There were in addition a number of academic halls which did not belong to the university. These have from time to time been absorbed by the colleges, St. Edmund's Hall founded in 1226 being among the few remaining, and this soon will be a part of Queens College. Some of these colleges are very old, like Magdalen, founded in 1480, from which Cardinal Wolsey graduated, and some very recent, like Keble, which was admitted in 1871. Hertford was a hall founded in 1284, and did not become a college until 1740. It was called Hart Hall.

Relation of Colleges to University.—Each of the colleges is a corporate body distinct from the corporate body of the university and not subject to the university. The arrangement suggests (though it is in no sense identical) the ancient Greek or the present United States government. The true key to the intimate relation which exists between the university and the colleges is to be found in the fact that the great majority of the members of the university belong to the colleges and that all who belong to the various colleges are at the same time members of the university. Undergraduates may continue their membership after graduation by payment of certain dues.

The Heads of the University.—The head of the university is the chancellor who is elected for life from among the nation's prominent men: Lord Salisbury, for example, held this office, and Earl Goschen is the present chancellor. Residence at Oxford is not required of the chancellor. The duties of his office fall to the vice-chancellor who must reside at Oxford, and who is nominated by the chancellor yearly, but who by custom is appointed for three successive terms. He thus serves four years in all.

The Heads of the Colleges.—The heads of the colleges elected by the fellows for life are called by different names in the different colleges. Thus the head is: The warden at Merton, New, All Soul, Wadham, Keble. The principal at Brasenose, Jesus, Hertford. The master at University, Balliol, Pembroke. The rector at Exeter, Lincoln. The dean at Christ Church. The provost at Oriel, Queens, Worcester. The president at Magdalen, Corpus Christi, St. Johns, Trinity.

The College and the Governing Bodies of the University.—Each college consists of the head, fellows, scholars (all of whom are graduates), and commoners, who are the undergraduates. The three great governing bodies of the university are: The hebdomadal council, the congregation of the university, and the convocation. Each of these has different powers, and is made up variously of the members of the university, excepting of course the undergraduate, the chancellor, vice-chancellor, and ex-vice-chancellor, together with all those who have taken degrees in arts, medicine, law or divinity, resident or nonresident. The hebdomadal council, called briefly council, initiates legislation which is passed upon by the congregation and convocation. The convocation transacts most of the ordinary business of the university by means of decree. It also confers honorary degrees. Professor Max Muller in his *Auld Lang Syne* recalls how when Newman, Pusey, and Kingsley were crossing ecclesiastical swords Pusey opposed Kingsley's candidacy to honorary degree. The immorality of *Hypatia* was Pusey's charge against Kingsley and he threatened to oppose in convocation his nomination. Such was the bitterness of those times.

The Undergraduate.—There are at present 3,500 undergraduates, about 120 of whom are medical students. These must reside in college buildings or in authorized lodgings within a mile of the centre of Oxford. The university has certain published rules which apply to junior members: undergraduates may not keep a horse or drive a vehicle of any kind, must not frequent taverns or hotels, must not smoke on the street, must not engage in games of chance or subscribe to or take any part in horse racing or shooting matches. The punishment is fine, rustication, banishment or expulsion. The gates of the colleges are closed at 9.10 p. m., after which permission to remain away must be obtained or a small fine is imposed. A night's absence is a serious offence. Wearing the cap and gown during specified hours is required, and black coats and white ties together with cap and gown at certain university functions are compulsory.

Coeducation.—It is possible for women to study and take examinations at Oxford on the same footing as the men by matriculating at Sommerville or Lady Margaret's. These institutions are not part of the university. Such a course of study and examination does not entitle to degrees.

The Proctors.—In order to enforce the university regulations two young men from among the graduate teaching staff are elected annually from each of the colleges in rotation. They have no jurisdiction within the college grounds. They perform police duty and their position is an unenviable one. Directly when a culprit is spotted the proctor accosts him with the question: "Name and college, Sir?" The many humorous stories connected with the dealings between proctor and student are, with the jibes of Encænna Day, familiar to most who know anything of Oxford.

The Medical Undergraduate.—Such is the world in which the student of medicine finds himself when he begins his studies at Oxford. His course extends over seven years, four or five of which he spends in Oxford, two of which he must spend in London attending hospital instruction. Whether it be four or five years depends upon how soon he satisfies his examiners of his fitness to conclude his studies in London, for, although certain examinations are required these need not be taken in any specified time. A bright man may in six years become qualified to practise medicine.

Combined Degrees in Arts and Medicine.—"Theology, law and medicine are superior faculties, each possessing degrees which are granted only to those who have previously graduated in arts. * * * The final honor school of natural science allows a student of medicine to offer some of the work required for a medical degree as part of his qualifications for the degree of A.B. The final school of natural science can be made to serve as a preliminary training for the more technical study and practice of medicine." American educational institutions have been slow to benefit by the experience of the old European institutions. There are of course many European methods not applicable to American conditions but certain broad educational problems when once solved through experience by one institution should be sufficient evidence to an observant governing body of another institution to warrant the prompt adoption of such a plan. This tardiness has come about from a narrowness of spirit and lack of information which is now everywhere diminishing, especially in America. Nevertheless American universities have been unpardonably slow to adopt this obviously advantageous plan of studying for the combined degree of A. B. and M. D.

The Course of Study for the Combined Degree.—The student of medicine then selects his college according to his fancy or to custom. In the first years his work is purely of an academic nature, into which as he proceeds he introduces biology, zoology, physics, chemistry, anatomy, and physiology.

The Medical School.—A few of the colleges have facilities for teaching physics and chemistry, but practically all the technical teaching is carried on at "the museums." This may be called the scientific department of Oxford, or what we would call the medical school, though this term is too narrow for the comprehensive character of the museums. In these buildings have been gathered all the specimens and scientific apparatus possessed by the university. As a museum of comparative natural history for teaching it ranks among the best. The Pitt Rivers collection illustrative of the development of primitive man stands among the first in Europe. Some of the specimens came from the Ashmolean collection presented to Oxford by Elias Ashmole in 1683. Here then are lecture rooms, a dissecting hall, laboratories, and a museum.

The Libraries.—The libraries of Oxford are the greatest pride of the university. The Bodleian

founded by Thomas Bodley contains 600,000 bound volumes and 30,000 bound volumes of manuscript. Books on all subjects, printed prior to 1851 are to be found here. Books after that date are to be found in another building, the Radcliffe Camera. This library was founded by the will of one of London's famous physician, John Radcliffe. Bibliophiles and those who love to tread old paths, though "the spirit of man has found new roads," will remember that Radcliffe was one of the possessors of *The Gold Headed Cane*, which is now among the treasures in the College of Physicians in London. To talk of Radcliffe here is one of the bypaths that I must resist, but let me suggest *The Life and Letters of Radcliffe* and *The Gold Headed Cane* as entertaining bits of log fire and pipe literature. These libraries being some distance from the museums, the more recent scientific works were moved from the Radcliffe Camera to the museums in 1861 and the Radcliffe Library was thus established. In 1902 the Society of Drapers presented funds to erect a library building on the museum grounds.

In these three splendid libraries, then, the Bodleian, the Radcliffe Camera, and the Radcliffe Library, one may trace a subject from the earliest writings known to the last monograph or periodical published.

The Student and the Libraries.—Students of the university are readers in the libraries, but no one may under any circumstance remove the books from the Bodleian or Camera. The books in the Radcliffe Library may be taken to the laboratories, but not away from the museums. The library like the laboratory thus becomes the workshop of the student, the importance of which some medical schools have failed to realize. The textbook alone is dry diet for the student, and if it is his sole source of information his scientific development must be stunted and his view of his profession narrow. A stranger in Oxford may become a reader in all these libraries by being introduced by a professor or some one well known to the librarian. This privilege is permanent.

College Libraries.—In addition to these university libraries each college has a library which consists of two parts; the ancient, in which there are many old and valuable books, and the modern, which is the college reading room for undergraduates. Here modern literature, periodicals, etc., are kept.

The Hospital.—As the medical studies advance, the necessity of a hospital arises. This is to be had in the Radcliffe Infirmary, built in 1770 with money appropriated by the trustees of the will of the same John Radcliffe. This is a well built hospital, with one hundred and forty-five to one hundred and fifty beds, four surgical and three medical wards. The wards are in separate wings, about ninety feet long, with about twenty-one beds in each ward. The average number of patients is one hundred and sixteen. This is the hospital for Oxford and the surrounding country for a radius of about thirty miles. A thoroughly equipped modern operating room, a dispensary, and a small clinical laboratory supply all the needs for preliminary instruction.

The Department of Pathology.—This department, under Dr. Ritchie, of Edinburgh, lately appointed, conducts about eighty to one hundred autopsies a year.

The Department of Physiology.—The name of Professor Burdon-Sanderson will always be associated with the international reputation of this department. Professor Gotch is now its head. The researches of Lorraine Smith and Haldane on the relation of oxygen to the blood corpuscles is among the recent contributions from this laboratory.

The Regius Professorship of Medicine.—The whole department of medicine, while not by statute under the regius professor, comes very much under his influence. This chair, established about 1535, is a life position, and was first held by John Warner, warden of All Souls.

Practically every important branch of science, of letters, of law, and of theology has a regius professorship. The appointment is made by the Crown and not by the university.

The following is a list of the incumbents of the regius professorship of medicine since its foundation.

1535	John Warner, D. M.
1554	Thomas Francis, B. M.
1561	Walter Bailey, B. M.
1582	Anthony Aylworth, D. M.
1597	Bartholomew Warner, D. M.
1612	Thomas Clayton, D. M.
1665	James Hyde, D. M.
1681	John Luffe, D. M.
1698	Thomas Hoy, D. M.
1718	Joshua Lasher, D. M.
1729	Wm. Beauvoix, D. M.
1730	Wm. Woodford, D. M.
1759	John Kelly, D. M.
1772	Wm. Vivian, D. M.
1801	Sir Christopher Pegge, D. M.
1822	John Kidd, D. M.
1851	James Odey Ogle, D. M.
1857	Sir Henry Wentworth Ackland, Bart., K. C. B., D. M.
1895	Sir J. S. Burdon-Sanderson, Bart.
1905	William Osler, M. D., F. R. S., F. R. C. P.

The statute is very brief regarding his duties. Those only which are specified are:

1. He shall lecture on such subjects connected with the study of medicine as the university shall from time to time determine by statute, and (if no such statute) as he shall judge most advisable.

2. He shall deliver in each year two courses of lectures at least, each course comprising at least eight lectures, act as examiner in all examinations for degree in medicine granted by the university.

There are three other clauses which do not refer to teaching. The duties of the chair have varied according to the state of the science of medicine in different centuries. Thus in 1624 the incumbent was prælector of anatomy, and in 1803 was appointed professor of anatomy, which was not separated from the chair until 1858.

A curious bit of history connected with the chair is the mastership of Ewelme, which was added to the regius professorship by King James I. in 1617. With the mastership go certain small revenues from the estate of Ewelme, and this was added by King James to augment the endowment of the professorship. Ewelme is an alms-

house, with accommodation for thirteen inmates and one member of their family. They are provided with clothing, food, and a small sum of money. The almshouse is about twelve miles from Oxford, in the heart of such country as centuries of pasture cultivation produce. The buildings consist of the church, a cloistered square building, where the inmates live, a school house for the children of the neighborhood, and a house for the teacher and his family, and one for the nurse. It has no bearing on the teaching of medicine at Oxford beyond the revenue above referred to, but as a spot for artist, antiquarian, and poet it is ideal. It is another of those many charming bypaths which I must resist in dealing with a description of medicine at Oxford.

The Radcliffe Infirmary (hospital) already described is not a part of the university, though it is freely used for teaching. The present regius professor has been appointed by the governing body of the institution an active consultant to the whole hospital, and he has not been slow to avail himself of the many opportunities for study which its wards offer.

THE RHODES SCHOLARSHIPS.—As these are open to medical students, a word about them is not out of place. The scholarships are of the yearly value of £300, and are tenable at any college in Oxford for three consecutive years. By the will of Cecil Rhodes the scholarships are distributed as follows:

A. Colonial, B. American, both by qualifying examination (not competitive); and, C. German, by appointment by the Emperor of Germany. The German scholarships were added by codicil by Mr. Rhodes in view of the order issued by the German Emperor making instruction in English compulsory in German schools.

A. Colonial, South Africa, 24, 8 a year; Australia, 21, 7 a year; Canada, 6, 2 a year; Atlantic Islands, 6, 2 a year, West Indies, 3, 1 a year; total, 60. B. American, 2 from each State and Territory. C. German, 15, 5 a year.

In the United States the scholarships are available to those who: 1, Have reached the end of their sophomore year in some recognized degree granting university or college in the United States; 2, are unmarried; 3, are citizens of the United States; and, 4, are between 19 and 25 years of age. In connection with this benevolent will of Mr. Rhodes the Oxford Travelling Scholarship of Radcliffe, that wise old physician whom I have had occasion to mention several times, comes to mind. In his will, made in the latter part of the seventeenth century, Radcliffe provides a fund for students by which they may for one half (I think it is) of their undergraduate years pursue their studies abroad. It is gratifying to realize that last year we had at an American medical school one of these "Radcliffe Scholars," who found his keenest inspiration in the "Land of the Setting Sun."

Conclusion.—Oxford has in some respects fallen behind the times in teaching. With the exception, however, of occasional cumbersome systems and red tape and an unexplainable awe of England's bogie, custom, the academic atmosphere of Oxford is, as it has always been, a

delight and an inspiration to the student. The Anglo-Saxon disposition, as history shows, requires an emergency to rouse it to action. On all sides and among all classes in England one sees an awakening. This is true of Oxford. The obsolete custom is being set aside and the needs of this day and generation are being introduced. The student in medicine as well as in other branches of learning will do well to spend part of his Wanderjahre among the scenes which knew Addison, Linacre, Sydenham, Radcliffe, Locke, Morton, Burton, and a host of others who learned there to

".... think clear, feel deep, bear fruit well."

THE TREATMENT OF JOINT TUBERCULOSIS IN THE OPEN AIR IN A CITY HOSPITAL.

By RUSSELL A. HIBBS, M. D.,

NEW YORK.

The treatment of joint tuberculosis in the open

worse in spite of all that could be done for them in the wards. Their temperatures continued high, appetite poor, they were steadily losing flesh and it was evident that unless some change for the better occurred they must soon succumb. For this reason it was decided on November 10, 1905, to try keeping them in the open air on the roof of the hospital. Two beds were placed there, and from that date to the present they have spent most of each twenty-four hours there; being brought to the wards only during the morning for dressings, adjustment of apparatus, etc.

There has not been seen the slightest ill effects from their remaining so long in the open air. The attendance of a nurse and an abundance of warm bed clothing have kept them from suffering from the cold. After the first night there a change could be seen in both, they slept better, took more nourishment, and their temperature showed a marked decline. Their condition has steadily improved in every way, they have gained flesh, their temperatures are practically normal, they take an abundance of food, and the



Patients with tuberculous disease of the joints under treatment in the open air on the roof of the New York Orthopædic Hospital.

air is being tried in two cases at the New York Orthopædic Hospital, one, a boy (W. E.), eleven years of age, having extensive spinal disease in the cervical region and also in the dorsolumbar, with suppuration in connection with the latter. Two abscesses discharging profusely, one on either side of the spine posteriorly. The second, a boy (J. S.), four years of age, with dorsolumbar disease and double psoas abscess, the one on the right side discharging.

Both of these patients were growing steadily

discharge from their abscesses has diminished. So that, while these two children are seriously ill, it does seem that their condition has been transformed from one of hopelessness to one in which the chances of ultimate recovery are immensely better.

It is our purpose to adopt the same measures in similar cases and others, until such times as accommodation for them may be secured in our country branch.

130 EAST THIRTY-SIXTH STREET.

ACUTE INTESTINAL OBSTRUCTION— BRIEF MENTION OF ILLUSTRATIVE CASES.*

By EDWARD W. PETERSON, M. D.,
NEW YORK.

ADJUNCT PROFESSOR OF SURGERY, NEW YORK POST-GRADUATE MEDICAL SCHOOL.

The cardinal symptoms of acute intestinal obstruction are pain, vomiting, and persistent constipation. Any cause that mechanically interferes with the passage of the intestinal contents will produce these symptoms. Moreover, the sudden arrest of the faecal current is invariably characterized by more or less profound constitutional depression. Naturally, as the condition is incompatible with life, prompt radical treatment constitutes the essential element of success. Where palliative measures are depended upon, spontaneous recovery is the exception, death is the rule.

The symptoms of acute obstruction are definite and characteristic. The general picture is one of shock. The face is pale and pinched, the expression anxious; there is usually more or less cyanosis, due to impeded respiration; the skin is clammy, the extremities cold, and the temperature is often subnormal. Respiration is accelerated and shallow, and even the tone of the voice is altered. Thirst is extreme and the tongue is dry. The pulse is small, weak, and rapid. The urine is scanty, high colored, or may even be suppressed; usually it contains an excess of indican. Abdominal pain, vomiting and tympany vary greatly according to the nature and location of the obstruction. Pain may be present in any part of the abdomen; it may be intermittent and colicky, or continuous and intense. It is due to the peristaltic efforts of the intestines to overcome the obstruction. Vomiting, as a rule, appears early; the higher the occlusion, the more distressing is this symptom. The vomitus consists first of the stomach contents, then of a green fluid containing bile, and finally of a dark fluid with faecal odor. The presence of actual faeces in the vomitus is exceedingly rare and occurs only when the stricture is low down in the large intestine. In obstruction high up tympany is either slight or absent altogether, but it is marked when the obstruction is low. Constipation is absolute after evacuation of the intestinal contents below the point of occlusion. In certain types mucus and blood may be passed, but unmixed with faeces.

In giving the causes of acute intestinal obstruction, anything which suddenly arrests the faecal current must be considered. For this reason the following classification is used:

I. Congenital obstruction. 1. Imperforate anus. 2. Intestinal occlusion or stenosis. 3. Volvulus due to torsion of the umbilical cord and to inflammation of the mesentery.

II. Acquired obstruction. 1. Strangulation. a, Hernia, external or internal; b, omphalomesenteric remains; c, bands; d, adhesions. 2. Intussusception. 3. Volvulus. 4. Obturation. a, Gallstones; b, enteroliths; c, tumors; d, foreign substances, etc. 5. Pressure obstruction, e. g., by displaced organs, tumors, etc. 6. Intestinal paralysis. 7. Infarction of the mesenteric vessels.

A detailed description of the different varieties

*Read before the Alumni Association, Cornell University Medical School, December 21, 1905.

above mentioned will not be attempted, for such can be found in any of the standard works on surgery. It may be of interest, however, to briefly refer to a few cases which illustrate some of the types of acute obstruction.

CASE I. *Imperforate anus.* John L., aged two days; admitted to the babies' wards October 18, 1905. Examination revealed an absence of the anal orifice. At operation it was found that the rectum ended in a blind pouch about one inch above the perinæum. The rectum was carefully freed, brought down, opened, and sutured to skin. The patient was discharged cured six days later.

CASE II. *Strangulated right inguinal hernia.* Norman K., aged nine months. A right inguinal rupture appeared six weeks after birth, but could be reduced with ease. (Truss was not applied.) On January 22, 1905, the hernia became strangulated. The patient was admitted to hospital June 23, with history of pain, vomiting, and constipation. As taxis had been used without success, no further attempt was made in this direction. An operation was performed and the last two inches of ileum were found to be strangulated, the constricting point being the neck of the sac. This was divided and the gut found to be in good condition. As the appendix could be brought into view easily, it was removed. The sac was cut away, its neck being closed with a purse string suture. The wound was closed according to Bassini's method. The patient was discharged as cured July 1, 1905.

CASE III. *Strangulated right femoral hernia.* Miss H., aged about thirty years; seen with the family physician, Dr. E. J. Palmer, August 29, 1905. There was a history of dietary indiscretion, followed by symptoms of ptomaine poisoning. During the retching and vomiting a small lump appeared in the right groin. Once before there had been a similar swelling which had disappeared spontaneously. The pain in groin and general abdominal pain soon became marked, vomiting continued, and bowels did not respond to enemata. Examination showed a dark, fluctuating, irreducible tumor in the right femoral region. An immediate operation was recommended as imperative. Two inches of absolutely black small intestine and about an ounce of dark colored fluid was found in the sac. The femoral opening was then enlarged, the gut drawn down and hot towels applied, followed by a return of circulation. The hernia was reduced, the sac removed and the ring closed with purse string suture of kangaroo tendon. Patient was discharged cured two weeks later.

CASE IV. *Incarcerated ventral hernia with strangulation by an adhesion band.* Delia C., aged fifty-one years; referred by Dr. R. L. Irish, August 11, 1905. There was an history of an umbilical hernia for eighteen years, which became strangulated and had been operated upon five years before. It showed now a recurrence of an irreducible ventral hernia in the abdominal wound. Twelve hours before admission to hospital the patient was seized with violent cramps in the abdomen, and vomiting and constipation. There was present a moderate degree of shock. At operation dense adhesions were encountered, and a small loop of the gut was strangulated by an adhesion band. After division of the band and further separation of the adhesions, the abdomen was closed in layers. Recovery took place.

CASE V. *Intussusception.* Elsie M., aged nine months. Referred by Dr. G. R. Pisek, June 2, 1905. For two days the child had been suffering with abdominal cramps and vomiting. There were frequent passages of blood and mucus, but no faeces were expelled. An elongated tumor on the left side could be felt abdominally and by rectum. Upon operation a two

and one half inch incision along outer region of the right rectus muscle was made and an intussusception of the ileocecal variety was readily reduced. The appendix was amputated. A prompt recovery followed the operation. The patient was discharged cured seven days later.

CASE VI. Gangrenous appendicitis. Volvulus. Charles W., aged thirty-four years, admitted to my service at the Post-Graduate Hospital on the evening of June 15, 1905, as an "emergency" case. One week prior to admission the patient was taken with vomiting and severe colicky pain in right iliac region, which radiated to the umbilicus. A severe chill followed on the second day of his illness; on the third day pain shifted to the left side, tympanites appeared, and micturition became difficult and painful. There was an absolute constipation for seven days. Upon examination the abdomen was found distended, rigid, and tender. An ill defined mass could be felt in the left upper quadrant, and a fluctuating tumor could be made out on the left side by rectal examination. On operation a large abscess was found in left iliac region into which dipped a gangrenous appendix, which was removed. There was another abscess in left lumbar region. The most interesting feature of this case was the presence of a gangrenous volvulus. About eighteen inches of the lower ileum had become twisted on its mesenteric axis, forming a complete obstruction. The gangrenous gut was resected, and an end to end anastomosis with Murphy button performed. A general peritonitis had already set in and no hope of recovery was entertained. Death occurred twenty-four hours after operation.

CASE VII. Obstruction due to plum stone impaction. Early in the summer of 1898 I was called to the Sledge plantation, near Greensboro, Alabama, to see a little colored girl, about ten years of age, who was seriously ill with abdominal pain, vomiting, great distention, and persistent constipation. Purgatives had been given and had seemed to aggravate the symptoms. Distinct palpable nodulation could be felt on the left side, along the course of the large gut. Upon rectal examination an impacted mass of plum stones was discovered. Upon inquiry it was learned that a few days before the child had greedily eaten a large number of plums and had swallowed the stones. The impacted mass was removed digitally and by enema. Quite a number of the sharp ends of the plum stones had become embedded in the rectal mucous membrane. Prompt recovery followed.

CASE VIII. Pressure obstruction. Nora M., aged six weeks admitted to the babies' wards November 15, 1904, with a history of abdominal cramps, vomiting distention, and constipation. A tumor could be felt in upper left abdomen, but there was no discharge of blood or mucus from the bowel. Temperature 96°, pulse 168, respirations 72. The condition was desperate. The patient was operated upon by Dr. Samuel Lloyd. It was found that an enlarged spleen had so compressed the splenic flexure of the colon against the liver as to cause an acute angulation and complete obstruction. This condition was relieved, but death from shock followed six hours later.

CASE IX. Pseudoobstruction due to temporary intestinal paralysis. Augusta W., aged fifty-six years, referred by Dr. M. B. Huson. Following a double nephropexy performed February 13, 1905, the patient developed symptoms of acute obstruction. The abdomen became enormously distended, there was frequent vomiting, and the bowels failed to respond, for a time, to enemata. Believing the case to be one of pseudoobstruction, due to temporary internal paralysis, from gaseous overdistention, eserine, $\frac{1}{100}$ grain, hypodermatically, every two hours, and high rectal injections were ordered. Under this treatment the symptoms gradually disappeared and recovery followed.

CASE X. Intestinal paralysis from general peritonitis. Clara H., aged four years, admitted to the hospital on August 14, 1905, in a profoundly septic state. There was a straight history of appendicitis with rupture of the appendix, and formation of an abscess which had already perforated the peritoneum, pus having infiltrated the abdominal wall. Owing to the critical condition of the patient, the abscess was simply opened, the pus sponged out, and a cigarette drain inserted. A concretion was found but the appendix itself could not be located readily, so it was not removed. Following the operation, which lasted only a few minutes, the temperature and pulse remained high. Everything administered by mouth was vomited promptly, and in spite of frequent enemata no faecal movement could be obtained. Death from peritonitis three days later.

CASE XI. Thrombosis of the superior mesenteric artery. C. E. V. J., aged thirty-five years, came under my care July 17, 1905. He gave a history of a double saphenous phlebitis eight years before, since which time he has had more or less trouble with ulcers of the leg. There



Thrombus of a branch of the superior mesenteric artery. (See Case XI.)

was also present a chronic valvular heart lesion. On account of the heart lesion, the phlebitis, and the character of the ulcers, the underlying trouble was thought to be syphilis. The patient, an intelligent man, to his own knowledge had never contracted specific disease. He stated, however, that there had been syphilis in his family, on his father's side. Rest in bed and elevation of the legs, with appropriate antiseptic applications, caused the ulcers to heal satisfactorily, but from the first there was more or less indigestion and abdominal discomfort. The patient belched a great deal of gas and complained of feeling "bilious." "Mixed treatment" was ordered, but had to be discontinued, as it apparently produced a mild gastric crisis—vomiting, pain in the epigastrium, and mental depression. During this time the temperature and pulse remained normal. Repeated abdominal examinations were negative.

On July 7 the patient seemed restless and anxious, and complained of an increase in the abdominal pain. There was slight tenderness in the epigastric and gall-bladder regions, but no rigidity or distention, and nothing definite enough to warrant an exploratory laparotomy. At 2 a. m. the following morning I was notified by the house surgeon that the patient suddenly had gone into a state of profound collapse. His condition when I reached the hospital was critical. He had just

vomited a large quantity of dark blood. Diagnosis of perforating gastric or duodenal ulcer was made. Haemorrhagic pancreatitis also was thought of as a possible cause of the trouble. A hasty laparotomy was performed. Many haemorrhagic spots in the omentum were seen as soon as the peritoneal cavity was opened. The jejunum, for a distance of about fifteen inches, was of a mottled mahogany color and gangrenous, and filled with thick tarry blood, which completely occluded the lumen of the gut. The mesentery was black, rigid, thickened, and very friable. (See photograph of specimen.) In spite of an intravenous infusion administered before the commencement of the operation, and vigorous stimulation, the patient sank rapidly and died within a few minutes after his removal from the operating table.

In this case laparotomy should have been performed at least twelve hours earlier, but the symptoms were so indefinite and the general picture so vague, that conservatism seemed clearly called for. Persistent abdominal discomfort, even if unaccompanied by symptoms of obstruction or inflammatory changes, is an indication for an exploratory operation. Of course hysteria and nervous manifestations should carefully be excluded. According to the literature on the subject, occlusion of the mesenteric vessels is seldom recognized during life. I can find reports of but two successful operations for this condition.

General Treatment.—As a rule, acute intestinal obstruction calls for prompt operative treatment. When expectant or palliative measures are relied upon the mortality rate is fully ninety to ninety-five per cent. Where the diagnosis is made early and operation is resorted to without delay, the death rate ought not to exceed five or ten per cent. In all cases of suspected obstruction, preparation for operation should be made while the diagnosis is being determined and while palliative measures are being carried out. It is good practice to wash out the stomach and to thoroughly empty the lower bowel. Vomiting and the absorption of toxins are thereby materially lessened.

Try to ascertain the nature and site of the obstruction. In cases of external hernia, intussusception, obturation, etc., a careful history and a painstaking physical examination will often settle these points. A hernia once strangulated, unless there be decided contraindication, should be operated upon, even if it can be successfully reduced by taxis. Intussusception of the colonic variety, recognized early, might be relieved by hydrostatic pressure; it is improbable, however, that this procedure would do any good in the ileocaecal or enteric types. Where intussusception has persisted longer than six hours measures other than operative are positively contraindicated. Impaction or obturation clearly calls for palliative treatment, and operation should not be resorted to unless absolutely necessary.

The nature and site of internal strangulation or obturation can seldom be definitely determined. In every doubtful case, let the question be settled by a prompt laparotomy.

As a general rule the distention of the colon by hydrostatic pressure, the insufflation of the bowel with gas, abdominal taxis and massage, are not only unscientific and useless but are positively dangerous. Puncture of the intestine through the abdominal wall for the relief of tympany is mentioned but to be con-

demned. Inversion of the patient, in the majority of instances, is a very foolish measure, but it is sometimes used. It is needless to add that purgatives are contraindicated. Large doses of opium mask the symptoms and too often lead to fatal delay in the employment of radical treatment.

The main point upon which it is desired to place emphasis is that in the treatment of acute obstruction, operation should be the method of choice, rather than the last resort.

54 WEST FIFTY-SECOND STREET.

SIMULTANEOUS UTERINE AND EXTRA-UTERINE PREGNANCY. REPORT OF TWO CASES.

By HIRAM N. VINEBERG, M. D.,

NEW YORK.

F. von Neugebauer in a recent number of the *Zentralblatt für Gynäkologie*, No. 46, 1905, gives a vivid and graphic description of a case of simultaneous uterine and extrauterine pregnancy occurring in the wife of a friend living some miles distant in the country whom he had been called to see and who died shortly after his arrival at the house. The woman in perfect health two months pregnant, had been seized on her way home from a ball with acute symptoms which at first were interpreted as being due to ptomaine poisoning. When von Neugebauer arrived, symptoms of internal bleeding were markedly manifest. The abdomen was distended, but not tense as in peritonitis. Neither fluctuation nor dulness could be elicited nor could a tumor be felt apart from the enlarged uterus which corresponded to the second month of pregnancy. A diagnosis was not definitely made. Perforation of a gastric ulcer, appendicitis, rupture of the gravid uterus were entertained. Almost to the last moment of her life the patient continued calling upon her friend, the great specialist, to save her. The tragedy enacted before his eyes made such a deep impression upon von Neugebauer that he deemed it a solemn duty to do what he could to avert a similar disaster in the practice of others. He accordingly at once reported the case in full in the medical press and in thus drawing the attention of the profession to the condition, he expressed the hope that similar cases in the future would be recognized and the life of the patient saved.

His report with its vivid setting, and the opinion he expressed that it is incumbent upon everyone meeting with a similar case to bring it before the profession have induced me to publish the two following cases occurring in my practice within a comparatively short time of each other. Although fortunately both of my cases ended happily in recovery, each presented exciting features, and certainly one patient (case II) would have died on the table had I failed to recognize the unusual condition and to act with great promptness and despatch.

CASE I.—Mrs. G., age 40, married 15 years. Patient has had two children, the last child 13 years ago, and no miscarriages. In 1896 I performed vaginofixation for retroflexion attended with marked symptoms. Following this she was entirely free of pelvic symptoms, but now and then the menses would be delayed two weeks or longer without any special reason and with-

out causing any symptoms, excepting the mental distress that perhaps she was pregnant. In each instance, however, the uterus was not found enlarged, and the subsequent course showed that pregnancy was not the cause of the delayed menstruation.

On March 25, 1903, the patient consulted me again after an interval of some time for symptoms which she thought were due to pregnancy. The menses were three weeks overdue, she was having nausea and loss of appetite, malaise and general poor health. On two occasions she stated she had had a severe attack of pain in the right side of the abdomen. On bimanual examination the uterus was found appreciably enlarged, corresponding to the gravid organ at about the fourth or fifth week. Her mental distress was so great for fear she was pregnant and she was so desirous of terminating it, if she were so, that I suspected she was exaggerating her symptoms in the hope that I might intervene. I put her off as well as I could, telling her that I doubted very much if she were pregnant, and in the event of her being so I saw no good reason for terminating it.

A week later she called again and was more importunate than before, saying that she could not endure her sufferings much longer, that she was in constant pain, etc. At this visit I found the uterus had further increased in size, and did not find any abnormal condition in the pelvis to account for her pain. I still doubted the genuineness of her alleged sufferings. A few days later, early in the morning, I was called up on the telephone by her physician, a prominent stomach specialist, informing me he had been called to see Mrs. G. at 3 a. m., that she was in great agony with pain in the right hypochondriac region, and that he had to administer a hypodermic of morphine to relieve her sufferings. He added that in his opinion the uterus should be emptied, as the pregnancy was doubtless the cause of the attacks of pain, though he could not satisfactorily explain the relation of cause to effect. The woman was appreciably losing ground, and I agreed with him that intervention was justifiable. Accordingly on April 12th, under narcosis, I emptied the uterus of the products of conception corresponding to about the seventh or eighth week. She made an afebrile recovery from this, and was up and about in a week.

On April 23rd, i. e., eleven days after the curettage, she sent for me again, as she had had another attack of severe pain in the right lower half of the abdomen, the character of the pain corresponding to that which she had had before the curettage. On examination I found an appreciable enlargement of the right annexa, so that the tube was felt to be the thickness of one's thumb and some tension in Douglas's cul de sac. The thought of extrauterine pregnancy was for a moment entertained by me, but the presence of fever (temperature 101°) and the rarity of the association of uterine and extrauterine pregnancy influenced me to look upon the case as one of acute salpingoophoritis. The patient was put to bed and kept under close observation.

On April 26th she had another attack of severe pain which she referred vaguely to the lower half of the abdomen. The pain after this became rather continuous and required opium suppositories for its relief. The temperature ranged from 100° in the morning to 102° in the evening; pulse, 90 to 110. Bimanual examination every few days showed an increase in the size of the mass on the right side with its extension towards Douglas's cul de sac. May 6th the temperature had gradually been subsiding so that for the preceding twenty-four hours the highest temperature had been 100°. The mass posteriorly had markedly increased in size, and gave a decided sense of fluctuation. I concluded that the time had come when a posterior vaginal incision should be made to give exit and drain

what I deemed was a pyosalpinx with a pelvic abscess. Orders were given to prepare for this on the morning of the following day. An hour after my examination I received an urgent call from the nurse, to the effect that the patient had gone into collapse and that the pulse was scarcely to be felt. I responded to the call at once and found an alarming change in the patient. She was of a pale, ashy color and lay in a state of apathy. The pulse was very small, scarcely to be felt, easily compressed and 160 or more per minute. The abdomen had grown very much distended. I had no doubt now whatever but that I had to deal with a ruptured tubal gestation sac.

The condition had grown suddenly so alarming, and in the absence of any member of the patient's family (she was in a private sanatorium) I did not feel justified in taking active measures without counsel. I therefore called in a prominent colleague in the neighborhood, who agreed with me in my diagnosis, but who advised waiting for reaction before operating. I reluctantly yielded to this advice. The expected reaction did not set in; the patient's condition, on the contrary, steadily grew worse and a few hours later I sent for the same colleague again. He agreed now that further waiting would be senseless. The consultant kindly gave his assistance at the operation.

On opening the abdomen to our surprise there was not as large an amount of free blood in the peritoneal cavity as we had anticipated. There was a fair amount of recent blood clots among the coils of the intestines. The intestines themselves were adherent to the pelvic organs and to the pelvic wall, and covered the uterus and the blood tumor in Douglas's cul de sac. After separating these adhesions I broke into the blood tumor with my hand and rapidly removed a large quantity of blood clots. A small fœtus corresponding to about the tenth week was found among the clots. The placenta, of fair size, was found at the bottom of Douglas's cul de sac. The right tube and ovary were scarcely distinguishable as such and were removed. The resulting wound in the broad ligament had to be carefully sutured, as the tissues were very friable. The entire posterior portion of the pelvic cavity was raw and irregular, and considerable oozing persisted from the raw surface. To control this a large sized Mickulicz tamponade was employed. As soon as the abdomen was opened there was an appreciable improvement in the patient's condition, doubtless due to the relief of the great abdominal tension. The patient passed through a stormy time for the first three days and then made a slow but very satisfactory recovery.

Although in the foregoing case the contents of the uterus had not been subjected to a microscopical examination, the macroscopic appearance of the curetted tissue (large flakes of what might even be called placental tissue) left no doubt whatever in my mind that they consisted of the products of conception of about six or seven weeks old. In emptying the uterus there was first the gush of amniotic fluid when the foetal sac was entered, then the usual amount of decidual tissue for that period of gestation was curetted away. No search was made for the embryo amid the blood clots or among the decidual masses brought away with the curette and hence none was seen. In fact, no attention was paid to it whatsoever, so positive were the other evidences of uterine gestation.¹

Assuming that both impregnations, that of the

¹ Could I have foreseen the subsequent events in the case I would have submitted the tissues removed from the uterus to a microscopical examination, not for the purpose of removing any doubt in my own mind, as none existed, but to satisfy some carping critic who might chance to read this report and, in the absence of microscopical examination, cast doubt upon the existence of the extrauterine gestation.

uterus and that of the tube, took place at the same time, the difference in the apparent ages of both products would be accounted for by the difference in time at which each was terminated, that of the uterus twenty-four days before that of the abdominal. It is evident that the tubal gestation became partly abdominal at a very early period of the gestation and that the ovum continued to grow after its escape from the tube through the placenta, forming new attachments in its changed position. It is probable also that a portion of the placenta still retained its connection in part with the tube, but all the tissues were so changed by the effusions of blood at various times that all landmarks were indistinguishable.

CASE II.—I was called on the night of May 2, 1905, to see a young woman, who was 28 years of age, who had been married eleven years, but who had never been pregnant. The object of my being sent for was to determine the cause of the pain from which the patient suffered in the right side of the abdomen at the border of the ribs. It was thought that the patient might have either appendicitis or gallstones.

Both the patient and the physician gave a very vague history. The woman was of an extremely neurotic temperament, had been ailing off and on for the past eight or nine months, and had pain in various parts of the body which were looked upon as rheumatic. On questioning the patient as to her menstrual period she gave a very vague answer, saying that she paid very little attention to the dates, inasmuch as she had never been pregnant and did not expect to be. However, there was something in the case which made me suspect extrauterine pregnancy, and I questioned the patient more closely and learned that at her last menstrual period, which was about a week before, she did not menstruate as much as usual, and for that reason had asked her physician to dilate her womb, as she feared she was suffering from not having lost enough blood. This was done and the flow occurred for a few days. On further questioning I learned that a few days before she had had a fainting spell, but both she and her husband made very slight of it, saying that the patient frequently had such spells.

The woman was short, extremely stout, with a very large and thick abdomen. On bimanual examination I could, with difficulty, determine that the uterus was slightly enlarged and that behind and to the right of the uterus it seemed to me that there was a fullness. The examination was, however, extremely unsatisfactory, owing to the patient's nervousness and to the thick abdomen.

I told her physician that I suspected extrauterine pregnancy, and suggested that on the following morning the patient should be examined under an anæsthetic, and that we should be prepared to perform a laparotomy if the suspicions were confirmed. The doctor thought that I was making a mountain out of a mole-hill and would not give his consent to anything further than an examination under an anæsthetic and to curette the patient if it was found advisable. I reluctantly consented to this.

On the following morning I came with my nurse and anæsthetist, prepared to carry out the examination and curettage. When the patient was anæsthetized I could make out a distinct mass to the right of the uterus, about the size of a hen's egg, and the mass seemed to disappear under the examining fingers. I turned around to the physician and told him I felt sure now that we had to deal with an extrauterine pregnancy, and that it had ruptured. This opinion was not taken seriously by the physician.

I proceeded then to curette and found material in

the uterus which corresponded to a pregnancy of four or five weeks, and when this material was being removed from the uterus the physician turned to me with an expression of satisfaction, and said: "This is all there is to it." I was so sure I was right in my diagnosis that in order to convince the doctor I made a posterior vaginal incision and a free spurt of blood issued from the incision. At this time I asked the anæsthetist how the patient was, and he said: "The pulse has just become imperceptible." I jumped up from my seat and saw that the patient was completely blanched. For a moment I was entirely nonplussed, I had no instruments with me to perform a laparotomy, and here was the patient lying on the table rapidly bleeding to death. I happened to have angular scissors with me and with them, after superficially scrubbing the abdomen, I cut through the thick abdominal wall, and as soon as I did so the blood spurted out like water from a hydrant. I entered the abdomen with my hand, caught hold of the right tube and ovary and fortunately having some catgut with me I was enabled to throw a ligature about them and arrest the bleeding. The blood kept pouring from the abdomen and the physician kept on urging that the patient must still be bleeding, but I was convinced that I had reached the source of the hæmorrhage and was satisfied to remove as much of the blood as I conveniently could. The patient now had been without a pulse at the wrist for several minutes. I asked the husband while I was operating to telephone to Mount Sinai Hospital, which was not far distant, to send a couple of the internes with an intravenous apparatus and the ambulance. In a few minutes two of the staff came with the ambulance, but with no intravenous apparatus. I sent them back for it, and as soon as they returned the veins in both arms were opened and a quart of saline solution injected in each vein. The patient was then taken in the ambulance to the hospital, and although she was critically ill for three or four days from the great loss of blood, she made a rapid recovery and had primary union of her abdominal wound, the only complication being a slight giving way of the wounds in the arm.

I presented the scrapings from the uterus and the excised tube to Dr. F. S. Mandelbaum, pathologist of Mount Sinai Hospital, saying that I suspected I had a case of uterine and extrauterine pregnancy and asked him to examine the specimens for me. A few days later he reported to me that it was a case of uterine pregnancy, but that there was no evidence of extrauterine pregnancy, to which I replied: "If you are sure of there being uterine pregnancy, I am sure of the extrauterine also, and would ask you kindly to continue your examination of the tube." He did so and found evidences of chorionic villi in another portion of the tube. The tube was not larger than the index finger, and the pregnancy had occurred in the isthmus portion, at which part the rupture had taken place.

Cases of associated uterine and extrauterine pregnancy are probably not as rare as we seem to think or as the literature would lead us to believe. Von Neugebauer, with that indefatigable industry in collecting statistics for which he is noted, has collected 155 cases, forty-eight of which were reported in the literature or to him personally during the past four years. It will be noted what a great increase of cases occurred in the recent years, and even in the four years referred to there has been a consecutive increase of cases: Nine cases reported in 1901, 11 in 1902, 19 in 1903 and 9 thus far in 1904. Von Neugebauer promises to give the clinical data of the 155 cases in an article that is shortly to appear in the *Zeitschrift für Geburtshilfe und Gynäkologie*.

This is not the place to enter into a theoretical discussion, interesting as it may be, of the physiology and pathology of this condition. Suffice it for the present to draw the attention of the profession to the likelihood of its occurrence. In a paper² some years ago I drew attention to the frequency with which extrauterine pregnancy is mistaken for early miscarriage. I quote the following from that paper:

"Every case of supposed early uterine abortion should be looked upon with suspicion, and unless the case is an especially clear one, and not requiring any surgical intervention, the patient should be anaesthetized as early as possible. This is to be done first for the purpose of making a careful and thorough examination to exclude an ectopic gestation, and secondly for the purpose of performing a proper curettage under satisfactory aseptic precautions."

To this I may now add that in every case of uterine miscarriage that shows abnormal symptoms after emptying the uterus, the probability of an associated extrauterine pregnancy should be considered, and likewise after an operated case of extrauterine pregnancy, should there be an undue persistence of uterine bleeding, one ought to think of the probability of an associated uterine pregnancy that has been overlooked.

751 MADISON AVENUE.

PROSTATIC ALBUMINURIA NOT AN INFREQUENT CAUSE OF ERROR IN THE DIAGNOSIS OF THE SO CALLED ORTHOSTATIC, POSTURAL, PHYSIOLOGICAL, AND CYCLIC ALBUMINURIA.*

By EDGAR G. BALLENGER, M. D.,

ATLANTA, GA.,

LECTURER ON GENITOURINARY DISEASES, ATLANTA SCHOOL OF MEDICINE.

It is a well known fact that albumin in the urine does not always indicate a kidney lesion and I think that in the following paper the facts show that the albuminous prostatic secretion, from glands that are hyperæmic or chronically inflamed, is not an infrequent source of error in many of the cases of apparently harmless albuminuria.

From many examinations of urine, passed after massage of the prostate, even when only slightly diseased, in which a proteid material, giving the tests for albumin, was constantly found, it occurred to me that this might be a more or less frequent cause of confusion as to the significance of albuminuria, and also a reliable sign as to the integrity of the prostate.

There can be no doubt that this fluid, when expressed by muscular exertions or from excessive secretion, passes back into the bladder much more frequently than it appears at the meatus in the form of a prostatorrhoea. In routine massage of the prostate not more than one patient in eight or ten

will have the secretion discharge from the urethra, while the urine passed after massage always contains albumin and prostatic debris. If the inflammation is well marked it will contain large flaky masses or shreds. The character of the secretion and the amount of the albumin vary of course with the severity of the condition.

All or various combinations of the following substances may be present: Serum albumin, globulin (?), nuclealbumin (occasionally in considerable quantities), mucin, epithelial cells, leucocytes, microorganisms, phosphates (very abundant), amyloid bodies (rather rare), and occasionally hyaline casts similar to but slightly larger than those of renal origin.

Spermatozoa may or may not be present and unless they are, there is nothing in the urine containing the prostatic secretion that will enable one to determine the source of the albumin, either by a chemical test or by a microscopical examination.

In doubtful cases therefore the prostate and seminal vesicles should be massaged thoroughly, the bladder irrigated and emptied, and the urine examined from the second glass of a specimen passed in about 30 minutes. This method will at least remove one source of contamination with extrarenal albumin and may explain many cases of the harmless albuminuria that are so frequently encountered and have made it unreliable as a sign of kidney disease.

Much pain is taken to avoid uterine and vaginal discharges in women, but the prostate is entirely disregarded unless there be an acute inflammation or a profuse prostatorrhoea, which the patient thinks is a loss of semen.

Urine containing this secretion may be clear, slightly cloudy, like very liquid glue, or milky in appearance. This white cloudiness may clear up on the addition of a few drops of nitric acid. The heat test for albumin is often not satisfactory owing to the alkalinity of the prostatic fluid which may prevent the formation of a precipitate. If the urine is not acid enough to overcome this, diluted acetic acid must be added, but drop by drop or it will become too acid and form a soluble acid albumin. For this reason much care is required in making the heat test. Nitric or picric and citric acid will throw down a precipitate after boiling that gradually settles to the bottom and gives an idea as to the amount of albumin present. The cold nitric acid test (Heller's) shows a distinct white ring at the zone of contact with the urine.

Robert's solution, as modified by Boston, containing 1 part of nitric acid to 10 parts of a saturated solution of magnesium sulphate, does not have the dark ring of oxidation at the junction of the fluids that occurs with undiluted nitric acid, and shows the presence of albumin whenever it is demonstrated by any other method.

The picric acid test is nearly always positive, as is potassium ferrocyanide when applied as a layer test.

The first urine passed by patients with a very slight watery urethral discharge sometimes will show the presence of a small amount of albumin, consequently the specimen for examination should always be from the second portion of urine.

The secretion from the prostate of one patient

² The Differential Diagnosis of Ectopic Pregnancy, with Especial Reference Between It and That of Early Uterine Abortion. *Journal of the American Medical Association*, May 11, 1901.

* Read before the Fulton County (Ga.) Medical Society, February 1, 1906.

being passed with only about 5c.c. of urine was nearly clear until an equal quantity of water was added, this produced a precipitate of large white masses, probably of nuclealbumin, which is insoluble in water, but is held in solution by the salts of the urine. It may be detected by the addition of acetic acid which produces a white cloud. It responds to nearly all the tests for serum albumin and is very similar to mucin.

The nuclealbumin probably is derived from the disintegration of the cells lining the prostatic ducts and follicles, while the serum albumin more than likely exudes from the inflamed or desquamated surfaces.

Now having shown the prostate a possible source of albumin, I desire to call attention to the striking similarity in the causes and symptoms of postural or orthostatic albuminuria and the flow of the secretion from diseased prostates. Both come on after exertions in the upright position, and are usually worse in the latter part of the day. Neither have renal casts, except perhaps hyaline which are not characteristic of any disease. The extensive studies of Dr. A. W. Stirling have shown that postural albuminuria is far more frequently found in the male than in the female. Neither of these diseases causes much impairment of health. No vascular changes are found in either. Phosphates are likely to be abundant in both. Calcium oxalate may be present in both; two patients showed an excessive amount in the urine after massage of the prostate.

It is characteristic of the so called cyclic, postural, etc., albuminuria that the amount of albumin is small in quantity and intermittent. In regard to this last feature I will relate some facts as to the periodic increase in the secretion from the prostate that has been strikingly apparent in five patients with chronic prostatitis. This observation occurred long before I thought there might be any relation between it and albuminuria. So marked is this in some patients that they fear they are to have a relapse and occasionally it is so regular that the time for an increase can be correctly predicted.

Most of the patients were given a prostatic massage every two or three days, and less frequently as they improved.

Upon the dates given below there was a distinct increase of debris massaged from the prostate. The amount of this increase varied from one to five times the amount obtained at the treatments during the intervals and lasted from two to five days. As the patients improved the amount of the increase diminished and the intervals became longer.

CASE I.—Age 38, married, had gonorrhœa 15 years ago; double epididymis, acute prostatitis, and chronic urethritis. I assumed charge during acute prostatitis and as it subsided and became chronic there was an increase in the secretion on the following dates: June 20th; June 30th, slight increase; July 8th, slight; August 14th, much, lasting five days; September 7th, much; October 30th, moderate; November 6th, considerable, lasting five days; November 21st, much; December 1, much; December 7th and 11th, little; December 29th, many large dense masses; January 18th, considerable.

CASE II.—Greek, age 35, married, tailor. Complains of urethral discharge. Prostate enlarged twice normal size; stricture of large calibre 2 inches from the meatus.

Increase in prostatic fluid: March 27th; April 11th; April 25th; May 1st; May 18th, much; June 13th, little; June 19th, very slight; June 29th, very little; July 7th, very little.

CASE III.—Age 33, married, had gonorrhœa twice, mild prostatitis during last attack. Marked increase in secretion massaged from the prostate: September 13th; September 25th; October 17th; December 8th; January 1st, only cloudiness; January 22nd, only cloudiness.

CASE IV.—Clerk, age 25, single. Had gonorrhœa four years ago, lasted six weeks, sexual weakness, varicocele, chronic prostatitis, and vesiculitis. Increase in discharge massaged from prostate and vesicles: June 16th; June 30th, four days; July 10th; July 20th; August 14th, five days; August 25th; September 5th, much; September 25th. A fresh attack of gonorrhœa interrupted the history here.

CASE V.—Age 34, single, gonorrhœa ten years ago, chronic prostatitis, urethritis, and stricture. Increase in amount from prostate: August 5th, much; August 18th, less; September 9th; October 7th; November 6th; November 20th; December 28th.

The tests for albumin were many times positive after the masses had entirely disappeared from the debris massaged from the prostate and its presence seems to be a very reliable test as to the condition of the prostatic follicles.

In trying to explain the reason for a periodic increase in the secretion of a chronically inflamed or hyperæmic prostate it occurred to me that there might be some relation between it and menstruation in women, as the prostate is the analogue of the uterus. No inferences of course could be drawn from so few cases, but I hope others may look out for this periodic increase so as to determine by longer series of cases if it is constantly present. The peculiar relapses, sometimes seen in gonorrhœal urethritis, that occur without any apparent cause may perhaps be due to this periodic wave of congestion or whatever it is.

I have a patient on hand now who was told five years ago in New York that he had a serious kidney disease and would probably not live more than a year. Upon assuming charge of this patient there was a large quantity of albumin in his urine and he also had a marked prostatitis. At no time were there any symptoms of renal disease, nor were there any casts present. Since treating him the albumin has entirely cleared up except after massage of his prostate, then it is constantly found.

I believe there are more patients than we realize with conditions similar to the one just described and that we should take more care in eliminating the prostatic secretions in reaching our conclusions.

The points I wish to emphasize are:

1. The secretion from an hyperæmic or an inflamed prostate is albuminous, while that from the normal gland is not, or is present in such a small quantity that, unless the seminal vesicles are massaged, the urine passed will not give the tests for albumin.

2. This is apparently a constant symptom of chronic prostatitis and may be depended upon in the diagnosis.

3. Prostatic albuminuria seems to be an appropriate name for this condition.

4. In making insurance examinations as well as in the diagnosis of obscure forms of albuminuria this possibility should be eliminated with the other

sources of contamination before reaching a positive conclusion as to the significance of albumin.

5. The periodic increase in the prostatic discharge, along with the striking similarity between the symptoms of intermittent, postural, orthostatic, and cyclic albuminuria, and prostaticorrhoëa makes the possibility of mistakes in the diagnosis extremely likely when this fluid flows back into the bladder and does not appear at the meatus.

6. This regular increase every ten to thirty days, and the analogy between the uterus and the prostate, suggest a relation between the causes of this condition and menstruation.

1004 CENTURY BUILDING.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at frequent intervals. So far as they have been decided upon, the further questions are as follows:

XLVII.—How do you treat whooping cough? (*Answers due not later than February 15, 1906.*)

XLVIII.—How do you treat pruritus ani? (*Answers due not later than March 15, 1906.*)

XLIX.—How do you treat lumbago? (*Answers due not later than April 16, 1906.*)

Whoever answers one of these questions in the manner most satisfactory to the editors and their advisors will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but not required) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLVI has been awarded to Dr. James Porter Fiske, of New York, whose article appears below.

PRIZE QUESTION NO. XLVI.

THE TREATMENT OF SPRAINED ANKLE.

By JAMES PORTER FISKE, M. D.,
NEW YORK.

The first thing in treating a sprained ankle is to be sure of the diagnosis. Many conditions from contusions to fractures have been called "sprains," and then subjected to various forms of treatment, often dependent on the vagaries of the attending physician, and the kind of supplies he happens to have on hand.

A sprained ankle is the result of a slipping or wrenching at or in the neighborhood of the ankle joint, accompanied as a rule by pain, and followed by more or less disability, loss of function, and swelling. Stretching of tendons and of ligaments with an accompanying synovitis of the ankle joint may be present. Ecchymosis frequently indicates the presence of fracture. There is usually a considerable tendency toward œdema.

Having made the diagnosis of sprained ankle, the best treatment is to put the patient at rest for twenty-four hours; render the foot and leg aseptic, paying particular attention to any abrasions, ingrowing toenails, etc., as possible sources of infection; and apply hot applications of one per cent. creolin, the foot and leg being elevated. Administer at once two grains of calomel, followed in eight hours by a glass of an aperient water. A free and copious action of the bowels is always indicated. These steps, carried out early, will prevent œdema and infection, and will place the ankle in condition to be immobilized if necessary.

At the end of twenty-four hours, in rather severe sprains, we may immobilize if these steps have been carried out early. A 10 per cent. ichthyol ointment smeared over the joint and then a light plaster of Paris cast extending from toes to knee, and making equal pressure over foot and ankle, are indicated in severe sprains accompanied by much synovitis. An ambulant plaster cast, supporting the tuberosity of the tibia, will enable the patient to walk. When he is resting the foot and leg should be well elevated. In milder cases, without much synovitis, strapping the foot and ankle joint is effective, and often may be instituted at once. The zinc oxide plaster may be used in very mild cases, the heavy extension plaster, diachylon on cotton flannel, to be used when more support is required. Whether we use plaster of Paris, immobilization, or simple strapping, the dressing must begin at the base of the toes, making equal yet firm pressure throughout as it extends upward.

As the swelling subsides and the patient improves the dressing is removed for inspection and renewed if necessary. When the patient is able to stand and walk without pain all dressings are discontinued, hot and cold baths being employed, together with massage with soap liniment or alcohol.

There is a real risk of the ankle being more or less permanently weakened after a sprain, and not infrequently a tendency toward flat foot is the result. All sprained ankles where the foot has been thrown out, or everted, are liable to be followed by a weakened arch, or the development of a valgus. So these sprains should be treated with the foot well thrown in, inversion, and later a proper shoe should be worn, a lace shoe, with a fairly low heel, slight extension sole, cut straight on the inner side, and built up on the inner side just enough to support the arch of the foot in its proper place.

To sum up, severe sprains require immobilization, mild sprains strapping. Hot applications at first are of value. Massage is an aid. Care should be taken to avoid the development of a weak foot, such as flat foot. A sprained ankle may be a very simple affair, clearing up within a week, or it may prove troublesome for an indefinite period, therefore requiring a somewhat guarded prognosis.

1000 BROADWAY.

Dr. Henry A. May, of the Navy, remarks:

The lesions which, together, form a sprained ankle, are the result of a sudden partial dislocation of the ankle joint. The foot is almost invariably strongly inverted, and the whole body weight is forcibly thrown upon its outer border. The trochlear surface of the astragalus is carried violently outward and forward, bruising the soft parts,

stretching or tearing the ligaments and tendons, and rupturing many of the smaller vessels.

After having tried various methods of treatment of this condition, I have returned to the preliminary hot and cold douche, followed by strapping with strips of adhesive plaster.

Before instituting any treatment, the foot and leg should be shaved as far up as the calf to permit the proper adhesion of the strips.

The afflicted member is then plunged into water as hot as can be borne for five minutes, then into cold water for the same length of time, again into hot water, and so on for half an hour. This procedure checks the tendency to swell, and gives decided relief from the severe pain.

While this douching is going on, the adhesive plaster is cut into strips one inch wide and of sufficient length, and should be ready to be applied immediately upon drying the foot; for there is then comparatively little swelling, and by applying the plaster at once an increase is prevented.

It must be remembered, in using this treatment, that the plaster is intended to correct a tendency to inversion of the foot due to stretching or rupture of the ligaments on the outside of the joint, as well as to limit swelling, and give support to the extensor tendons of the leg. For this purpose the strips must pass well up the leg, and must be applied with the foot in a position of forced eversion.

The first strip begins high up the leg, on the inner surface of the calf, is carried downward behind the inner malleolus, under the heel, strongly everting the foot, then upward behind the outer malleolus to a point on the calf opposite its beginning. The first foot strip begins at the base of the little toe, is carried backward and behind the heel, and along the inner border of the foot to the great toe. Subsequent strips simply parallel these two guides as nearly as possible, each strip overlapping its neighbor about one fourth of an inch, until the entire foot and ankle are covered up. During the whole of the operation the foot must be strongly everted, and therein lies the secret of the success of this method of treatment.

When the dressing is properly applied, it fits neatly every hollow and hummock in the contour of the foot, ankle, and leg. This can be more thoroughly insured by drawing each strip through an alcohol flame just before it is applied, and by making small notches in the strips where they are found to be necessary.

The patient now replaces his shoe and stocking and goes about pursuing his ordinary occupation. After the first hour or so of use, very little pain is experienced.

I have found the results of this line of treatment to be: First: More rapid resolution than is accomplished by the use of any other method of procedure; second, a minimum amount of pain, and that for only a short time; third: practically no interference with the patient's daily work.

Dr. Elbert S. Sherman, of Newark, N. J., states:

There is a common saying that "a sprain is worse than a fracture." In occasional instances there seems to be some truth in this and it is probably on account of the fact that in many cases sprains are not given the care and attention, either by the

physician or the patient, that fractures receive. A sprain of the ankle is an injury caused by a sudden or violent movement of the joint further than its physiological limits, producing a laceration, varying from very slight to complete separation, of one or more of the ligaments forming the capsule of the joint. More or less effusion of blood in the surrounding soft parts and in severe cases into the joint itself takes place and inflammation of these parts ensues. In the majority of cases it is the external lateral ligament that is injured.

There are three indications to follow in treating a sprained ankle: 1. Prevention of effusion. 2. Absorption of what has already occurred. 3. Assisting Nature in repairing the injured tissues.

The details of treatment vary somewhat with the extent of the injury. In all cases the joint should be put at rest and given mechanical support. In slight cases a snug flannel bandage from the toes to the knee affords sufficient support, but more severe cases should have in addition to this some form of splint such as a moulded plaster of Paris splint applied to the plantar surface of the foot and posterior surface of the leg. If the case is seen early cold applications should be made for forty-eight hours, preferably by means of one or two ice bags, thereby limiting the amount of effusion and relieving pain. As soon as the inflammation begins to subside, the ankle and leg should be massaged every day to reduce the swelling about the joint, and in about a week or as soon as it can be done without causing pain passive motion should be employed to prevent the formation of adhesions which are apt to occur in the more severe cases, also when there is effusion into the joint. It is not often necessary to confine the patient to bed for more than a day or two, but he should use a crutch until he can walk without pain.

In cases of mild and moderate severity a very satisfactory dressing after the more acute symptoms subside is strapping the joint with strips of adhesive plaster according to Gibney's method. This supports the ankle, limits its movement, and the pressure of the plaster hastens the absorption of the effusion. It is seldom necessary or advisable to use a plaster of Paris cast except in severe cases, when it is impossible for the patient to stay at home even for a day or two, and keep the injured part at rest. In such cases a light cast may be applied from the toes nearly to the knee and cut open after hardening takes place so it can be removed daily, and the joint inspected and treated as outlined.

In cases in which the swelling and stiffness remain for a long time, soaking the leg in hot water every night, followed by massage and manipulation, is beneficial. Occasionally a sprained ankle is quite painful for several weeks or even months, especially after too much use or in stormy weather. In these cases, static electricity applied three or four times a week is useful.

Dr. Pearce Kintzing, of Baltimore, says:

Sprains of the ankle joint differ markedly in severity, and consequently should differ in the methods of treatment. The old adage that a sprain is worse than a break is apocryphal.

Being satisfied that you are dealing with a sprain and not with a fracture or a dislocation, the indica-

tions are: to allay pain; reduce swelling; limit inflammation; restore function. The best method of directly accomplishing the first two of these, and of indirectly attaining the others, is to immerse the member in a bath of salt water, as hot as can be borne. A large bucket or foot tub best answers the purpose. The salt should be added to nearly saturation. The sooner this can be done after the receipt of the injury, the better and the quicker the result. Let the leg remain in the hot brine for 15 or 20 minutes, then immerse in a bath of plain cold water, temperature 40° to 50°, for from 3 to 5 minutes, or, until the limb feels comfortably cold, when it is again placed in the hot brine. Two hours, or even less, of this alternating treatment suffices materially to lessen the swelling and consequently the pain, which in considerable measure is due to the pressure caused by the former. The action is due not alone to the different temperatures, but also to the different specific gravities of the two fluids. After several hours' rest, the entire process is repeated. At the end of twelve, or at most, twenty-four hours, I have found that an elastic bandage lightly applied will usually accomplish what remains to be done. The bandage which I prefer contains no rubber, but is made of elastic fibre cotton. Gentle motion, followed by restricted use, is now allowed. The bandage is removed after a time varying between twenty-four hours and several days.

In flabby skinned and flabby muscled women on the downward vital slope, the injury is apt to be severer and the effects more lasting. Here the exudate into the joint may contain a proportion of blood, indicated by subsequent ecchymosis, as is also the case in severe sprains, even in the muscles. The immediate treatment in these cases is that described, but the subsequent treatment is joint rest, with or without a cast. The elastic cotton bandage answers an excellent purpose after the cast is removed.

In patients whose occupation precludes protracted rest, I thoroughly and thickly swathe the ankle in raw cotton, apply a short, moderately thick cast, and allow the patient to pursue his avocation. This limits without totally preventing motion and often forestalls the development of subsequent inflammation; but in such cases I carefully watch the member. The cast is removed on the seventh day, and alternate hot and cold douches and brisk friction urged.

Massage, followed by early use of the joint, sometimes denominated the heroic method, answers well in light and moderate sprains, and immediate results are more quickly apparent, but in severe cases the ultimate results are less favorable than those obtained by rest and support. I speak positively upon this point, and its medicolegal aspect should not be entirely lost sight of. Continued dull pain and increase of swelling after massage contraindicate its use, but with passive motion it is excellent treatment after removal of the cast. The elastic bandage is worn for a very limited time after the severer injuries. A common mistake is its too long continuance. I have abandoned adhesive straps as being less comfortable and less efficient than the bandage.

Dr. Henry Wallace, of Glen Ridge, N. J., writes:

A sprain or strain is the sudden shifting of the component parts of a joint farther than the natural

conformation of the bones, ligaments, etc., should permit, yet short of dislocation. The extent of a sprain may vary from the slightest overextension of the joint tissues to an injury of considerable magnitude in which rupture of ligaments, joint capsule, synovial structures, bloodvessels, and muscular attachments occur and warranting the most assiduous attention.

We often hear that a bad sprain is worse than an ordinary fracture and in many instances this is the case, especially if suitable and proper treatment is not directed to it.

Treatment: The outline given here applies to all sprains except those of the greatest severity; and even they are treated in almost the same way, dependent upon the individual condition.

When called to see the patient shortly after the receipt of the injury, an exact diagnosis can be made before the onset of swelling, which is sometimes very great, that we may rule out fracture or dislocation. My two sheet anchors in the treatment of sprains at the present time are strapping after the basket method and skilful massage.

In some cases where there has been a very rapid effusion of serum into the tissues it is possible by proper manipulations to reduce this to a very large degree and without much pain. If the injury is severe, the pain and tenderness extreme and the inflammatory swelling well advanced massage must be deferred until these conditions are disappearing. The strapping of a sprained ankle must be done carefully and so applied as to give support where it is most needed. Zinc oxide adhesive plaster one half inch in width is the most convenient in practice. It is applied after the general method of Gibney. In many cases of moderate severity the patient will be able to get about in a very short time, possibly using a stick for a time, until the acute symptoms pass and confidence is obtained. As soon as this strapping becomes loose it is replaced and so on until restoration to the normal condition.

In more severe cases and where there is much pain it may be necessary to advise elevation of the limb and an ice bag. Later the patient should be about as soon as possible with strapping.

There are a certain number of cases which seem to do well up to a certain point and then progress abruptly stops. In these cases the inflammation has disappeared, the pain and tenderness have about gone, the color of the skin about the joint has changed from purple to green or yellow and there may or may not be limitation of motion. Here we have remaining an atonic state of the tissues. The ligaments, capsule and synovial structures have been overstretched, are relaxed and suffering from malnutrition and there may be some adhesions. In such cases bathing with cold water and more especially the application of skilful massage and passive motion daily to the joint and the muscles related to it, will bring about normal function more quickly than any other mode of treatment. Often the best results in such cases are long delayed or missed by locking up the joint in a plaster or other dressing.

Without doubt a joint that has been severely sprained will be more or less weak for a long time, prone to another strain, but the end results should be complete restoration in a reasonable length of time.

(To be continued.)

Therapeutical Notes.

Detergent Gargle for Granular Pharyngitis:

R Sodii boratis,.....6 parts;
Glycerini,10 parts;
Aquæ menth. pip.,.....40 parts;
Aquæ destillatæ.....100 parts.
M. Ft. solution. Dilute with hot water and use frequently.

Medizinische Blätter, 1906, No. 2.

Solution of Formaldehyde in Erysipelas.—Dr. Teutschländer, a Swiss physician, reports excellent results from the application of pure formol (liquor formaldehydi) to patches of erysipelas (*La Semaine médicale*, January 24, 1905). In two cases the patients had suffered from previous attacks of erysipelas, which went through the regular course. When treated with compresses moistened with a solution of formaldehyde the dermatitis was arrested after the second dressing, the temperature fell from 104° F. (40° C.) to near normal and cure was complete in four days.

Syphilitic Stenosis of the Larynx in an Infant.—F. de Q. Mattone reports a rare case of hereditary syphilis (*Revue des maladies de l'enfance*, October, 1905; *La Tribune médicale*). A much emaciated four months' infant had suffered with dyspnoea attacks since birth; the difficulty of breathing was intensified by crying and struggling. The diagnosis was made of syphilitic laryngitis with stenosis, congenital in origin. Two series of twenty-five injections of mercury biniodide (5 milligrammes, or $\frac{1}{12}$ grain) each, checked the attacks and brought about a remarkable improvement in the general condition, and incidentally confirmed the ætiological diagnosis.

Toxic Symptoms Following Application of a Belladonna Plaster.—George Whyte reported to the Forfarshire (Scotland) Medical Association a case of belladonna poisoning, produced by absorption from external application. A few months ago he had been called to an urgent case, and found a woman, delirious, excited, and talkative. She complained of dryness of throat and mouth; the pupils were dilated and did not react to light. Three days previously, for the relief of a pain in her back, she had applied a plaster, which was evidently belladonna. This had caused great skin irritation and scratching in the neighborhood, which had favored the absorption of the drug. Removal of the plaster and the administration of one centigramme of morphine repeated at intervals gave complete relief (*Edinburgh Medical Journal*, January, 1906). (Unusual individual susceptibility was probably a factor in the case.)

Alkaline Treatment for Gastric Disorders.—René Bénet, in *Thèse de Paris (La Tribune médicale*, January 6, 1906), reviews the important indications for the use of alkalies for the relief of nausea, irritability, excess of hydrochloric acid, pain, etc., attending gastric disorders. In all diseases (acute or chronic ulcer, cancer, all forms of dyspepsia, etc.) accompanied by late pain, alkaline

remedies should be given. It is a medication for the symptoms rather than for any particular disease. The preferred formula is:

R Sodii bicarbonat.,.....0.75 gramme;
Calcis preparatæ, or /0.25 gramme;
Magnesii oxid.,0.02 gramme.
Pulv. belladonnæ fol.,.....0.02 gramme.
M. To make one packet. To be taken every two or three hours from 8 o'clock in the morning until 8 o'clock in the evening.

At the end of a week if the pain and tenderness have diminished, the intervals of dosage can be lengthened. In a severe case, if there is no improvement at the end of a month, the question of surgical interference is to be considered. At the same time that this treatment is given, the diet must be carefully regulated. After the alkalies are no longer required, on account of the disappearance of the pain, then the alimentary treatment is to be continued alone.

Ætiological Treatment of Hyperidrosis of the Extremities.—Julien Bonygnes, from his clinical studies of this condition (*Archives générales de médecine*, January 2, 1906) decides that hyperidrosis of the extremities, sometimes called essential hyperidrosis, is not a distinct disease, but only a symptom which is part of a complexus that must be recognized in order to be able to determine its true nature. It appears, in fact, in toxæmia due to arthritism, alcoholism, and to change of life (*age critique*); also in toxic infections, such as syphilis, paludism, and tuberculosis. It is especially frequent in young girls suffering with chlorosis or scrofula; and may be regarded as a part of the clinical history of the last named diseases. From the physiological point of view, the exaggeration of diaphoresis at the extremities is the consequence of a toxæmia, which calls into action the natural function of the medullary centres which directly govern the function of the sweat apparatus. The local treatment is therefore by itself without much avail. The pathogenic general treatment will vary according to the causes. In the immense majority of cases it will be the same as that for scrofula and chloroanæmia.

Headache in Lymphatic Subjects Treated by Calcium Salts.—Believing that the headaches of certain individuals with lymphatic temperaments had its origin in deficient coagulability of the blood, G. W. Ross, of London, tried the calcium salts, both the lactate and the chloride, and especially the lactate, in the dose of one gramme dissolved in a third of a glassful of water, repeated three times a day before meals. The results have been very gratifying. Out of forty-eight patients subjected to this treatment, forty were entirely cured, and eight were notably benefited. In light cases, the symptoms disappeared in an hour or an hour and a half after the first dose. Almost always the headache had disappeared by the end of the fourth day. In very severe cases the desired result did not appear until the end of ten days. It is advised to continue the treatment, at the least, for three weeks, and in grave cases for a month and a half. In small doses the treatment offers no inconvenience, and does not cause

intolerance. Other symptoms were observed to be likewise favorably influenced by this treatment, such as pain after eating, puffiness of the face, or œdema of the limbs. Urticaria disappeared in two cases and neuralgia in four others. In five cases of Bright's disease, out of six thus treated, the remedy was equally efficacious against the headache and œdema.—*La Semaine médicale*, January 24, 1906.

Suprarenal Extract in Poisoning by Chloroform.—Basing his opinion upon successful experiments made upon the hearts of mammals poisoned by chloroform, Winter (*Wiener klinische Wochenschrift*, 1905, No. 20) suggests that in the cardiac collapse of chloroform narcosis—if the condition is desperate and all other means have failed—we may have recourse to the direct injection of suprarenal extract into the left ventricle. During the procedure the artificial respiration should not be discontinued.

Scopolamine as a Hypnotic and Sedative in Mental Diseases.—In *Thèse de Paris* (1905) with this title, M. Chollet reports upon the use of the scopolamine hydrobromide, hypodermically, in doses of a half a milligramme to one milligramme and a half (gr. $\frac{1}{128}$ to $\frac{1}{42}$) as a hypnotic and sedative, in thirty cases, which were suffering with general paralysis and acute and chronic mania. He found that there was a rapid hypnotic effect exercised upon all cases of insomnia due to agitation. In from ten to thirty minutes after the injection, the patient went to sleep, and remained so for from five to eight hours. On the following day the patient was generally calmer, but the sedative action was always less marked than the hypnotic effect. With the exception of some vomiting, no evidence of intoxication was produced. M. Brelet, in reviewing for the *Archives générales de médecine* (January 2, 1906), points out the fact that the treatment is not free from risk. He believes that the advice should have been given with some reserve, since very serious and even fatal accidents have followed those injections of scopolamine. Therefore great prudence should be exercised in the employment of this medicament, which, moreover, has been shown by Stella to exert a toxic influence upon the respiratory centres and the myocardium.

Injections of Sodium Nitrite for the Lightning Pains of Tabes.—Dr. Raymond says that it is an error to believe that mercurial injections in intensive dosage will always cure the lightning pains in locomotor ataxia. While it is well to begin with this method, it should not be continued longer than six weeks. If at the end of this period no benefit has followed this mercurial treatment, another method must be followed. He recommends hypodermic administration of sodium nitrite, dissolved in distilled water. One injection of 1 c.c. of a 1 per cent. solution is given every day for ten days. It is then suspended for ten days. The treatment is then resumed for another ten days and again suspended for the same period. When again resumed, the dose of sodium nitrite is doubled (by using a two per cent. solution). This is again continued for ten days

and after another period of rest the dose is again increased (by the use of a three per cent. solution). This treatment is continued, with the same interruptions, until forty or fifty injections have been given. At this time benefit is usually observed, but not before. The relief is nearly constant. A case was shown which illustrated the results of this method. It was that of a young married woman who had been infected by her husband seven years previous to coming under observation. The knee jerk and ankle reflexes were absent. Pupils nonreactive to light or accommodation. Slight sign of Romberg, when walking with eyes closed. She had suffered for three years with fulgurant pains in the legs, which were not relieved by injections of mercury and other antisyphilitic treatment. The sodium nitrite was then given to her subcutaneously according to the method just prescribed, and at the end of twenty-four injections (third series), a marked improvement was manifest. The vasodilator remedy gave better results than the mercurial treatment (*Journal des praticiens*, December 2, 1905; *Journal de médecine*). (Some credit, however, should doubtless be given to the mercurial course which preceded the injections of sodium nitrite.)

The Importance of Diet in Angina Pectoris.—William Russell read a paper before the Edinburgh Medico-Chirurgical Society on the relation of angina pectoris and allied conditions to a vasculocardiac reflex having its origin in the abdomen (*Edinburgh Medical Journal*, January, 1906). The differences in opinion which now prevail with regard to the real nature of the anginal attacks, are due to the fact that angina, like dropsy, is a symptom of different pathological changes. However induced, it is always immediately due to a sudden embarrassment of the myocardium. Thus it may be produced by a general arterial spasm which throws a sudden strain upon the heart, or there may be a sudden anæmia of the heart because of contraction of the coronary arteries. The taking of food into the stomach is naturally followed by a great influx of blood into the splanchnic area, which is followed by a reflex contraction of the systemic arteries, setting up a condition of hypertonus. In a large measure, the degree of this contraction depends upon the nature of the food, i. e., a large meal and stimulating food produce a marked contraction. Sclerosed vessels are particularly sensitive to hypertonic contraction. It is, therefore, readily understood how the slightest error in diet, in such individuals, produces anginal phenomena. Dr. Russell referred to several such cases in which attacks occurred even while taking the remedies usually prescribed. When, however, the diet was altered to one of less stimulating character, marked improvement followed. Unfortunately, in angina major, due to grave anatomical changes associated with spasm, no cure can be looked for, but regulation of the diet will ameliorate the symptoms. In minor cases, unattended by anatomical change, on the other hand, a cure may be expected by combined remedial and dietetic treatment.

NEW YORK MEDICAL JOURNAL

INCORPORATING THE

Philadelphia Medical Journal
and The Medical News.*A Weekly Review of Medicine.*

Edited by

FRANK P. FOSTER, M. D.,
and SMITH ELY JELLIFFE, M. D.

Address all business communications to

A. R. ELLIOTT PUBLISHING COMPANY,

Publishers,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, FEBRUARY 24, 1906.

PHARMACISTS ON PHYSICIANS.

At a recent meeting of the Medico-Pharmaceutical League Mr. Frédéric S. Mason read a paper which began as follows: "I address this meeting with some hesitation because I am connected with the manufacture of proprietary remedies. Perhaps I may, however, claim your indulgence when I say that I am also a pharmacist and have long been in contact with physicians in such capacity in Europe, where the relations between the physician and pharmacist are more cordial than in this country" (*American Druggist*, February 12th).

It may be that the relations between the physician and the pharmacist are less cordial in this country than they are in Europe, and it is probable, we think, that they are less cordial here now than they were a few years ago. Those of us who remember the late Dr. Neergaard, the late Dr. Rice, and the active career of Mr. Ewen Mac Intyre, of New York; the late Professor Parrish, of Philadelphia; and the late Mr. Metcalfe, of Boston, will have no difficulty in recalling the esteem in which those gentlemen were held by the medical profession or the frequency with which their advice was asked for by physicians. Doubtless there are equally able and upright men in the pharmaceutical profession at present, but the conditions which shape their relations with medical men are changed. Perhaps the change may turn out to be only temporary, for we think it can hardly be attributed entirely to the increased use of ready made preparations and the consequent comparative decline in the number

of magisterial prescriptions that find their way to the shops.

There ought to be the utmost confidence and cordiality between physicians and pharmacists, and the restoration of the relations that formerly prevailed rests as much on our pharmaceutical friends as on ourselves. Each profession should be tolerant of the other's occasional shortcomings and refrain from proclaiming them as representative. We regret to be obliged to say that this policy is not always observed, as is shown in a paper read at the same meeting by Mr. J. Diner, who appears to rate physicians very low.

MEDICAL LEGISLATION IN CONNECTICUT.

Connecticut, traditionally ready to apply legal remedies for what appears deplorable in the conduct of its population, has enacted some laws which might well be noted by sister States as an effort at regulating sensibly some matters which cannot be safely left unregulated. For instance, one statute makes it mandatory that wood, or methylic, alcohol, under any name or in any mixture, shall always bear a poison label except when sold for use in the arts. The advisability of such an enactment is amply demonstrated by recent experimentation bearing on the dire possibilities in the poisonous action of wood alcohol, capable as it is of producing not only death, but the almost more deplorable result of total blindness.

Another step in the same direction is the restriction of the sale of cocaine and its allies, which makes it unlawful for any person to sell, furnish, or give away any cocaine or preparation containing that or the allied substances, or their salts, except on the original written order or prescription of a lawfully authorized practitioner of medicine, which order or prescription shall be dated, shall bear the name of the person for whom it was written, and shall be signed by the person giving it. That part of the law which forbids the refilling of such prescriptions without the issuance of a second order by the physician is the significant element in it. Too often a perfectly legitimate and necessary prescription has been repeated again and again long after the occasion for its use has passed, and the patient is turning to his own ruin what was meant to serve a beneficent purpose. Such possibilities have been a source of anxiety to many conscientious physicians, and different methods have been adopted by individual practitioners to prevent their occurrence, but by this law the responsibility is removed from a profession which still bears at least its due proportion of responsibilities.

That the law as framed does not reach that class of cocaine users which has grown so unhappily large is perhaps regrettable, but scarcely other than inevitable. To frame a statute which should guard such victims of the addiction without involving dangerous restrictions and providing opportunities for the exercise of perilous power by unscrupulous or vindictive persons might well seem an arduous attempt.

Yet another phase of recent medical legislation in Connecticut is a law which provides for the fining of any person who advertises any so called "monthly regulator" for women. The reason for this article is made perfectly clear, since it is inserted as an amendment to that section of the *General Statutes* which prescribes a penalty for encouraging the commission of abortion. There is still some pretense among the newspaper men who accept such advertisements that they believe them to be not abortifacients, but legitimate remedies. Even if we admit as genuine this childlike confidence, there is no doubt that the readers who are induced to buy such remedies and to communicate with those advertising in such a way believe as a rule that it is relief from pregnancy and not from any pathological condition that is offered them. A little observation will demonstrate that, as pointed out in a recent article in the *Lancet*, the advertisers do not fail to make clear to any who are seeking aids to abortion that the proposed remedies are to be depended upon to remove *all* irregularities in the menstrual flow, no matter what may be the cause and no matter of how long standing.

A NEW THEORY OF PHARMACOLOGICAL ACTION.

An interesting analogy to Ehrlich's side chain theory is afforded by a recent explanation of the manner in which various drugs and the nerve endings influence the tissues. In studying the action of nicotine upon nerve and muscle Professor J. N. Langley (*Journal of Physiology*, December), discovered peculiar effects which could be explained only upon the hypothesis that the drug acted neither upon the nerve nor upon the true muscle substance, but affected an intermediary, or receptive, body known as the "synaptic" substance.

It was found that in the normal state both nicotine and curare abolished the effect of nerve stimulation, but did not prevent a contraction from being obtained by direct stimulation of the muscle. Moreover, on the further injection of an adequate quantity of nicotine, stimulation of the

nerve would produce the muscular contraction. From these results it was concluded that neither the poison nor the nerve impulse acted directly on the muscle substance, but on some accessory substance. The latter is normally the recipient of the stimuli, which it transfers to the contractile material, and is spoken of as the receptor substance of the muscle. Only on this hypothesis can one account for the fact that, while a small dose of nicotine prevents the nerve impulse from reaching the muscle, a large dose has no effect.

Each kind of muscle has its own specific receptor substance, and it is inferred that the same is true of all other kinds of tissue. Certain familiar actions of drugs on special tissues can easily be explained on the basis of this ingenious theory. Thus, it is well known that adrenalin has an elective action on unstriated muscle, but particularly that of the bloodvessels, while other drugs exert their action chiefly or exclusively upon the muscle of the heart. Applying the terms of Ehrlich's side chain theory, Langley considers the receptor substances as side chain molecules of the contractile substance of the muscle.

It is pointed out that in all cells two constituents must be distinguished. The first consists of substances that carry out the chief functions of the cells, such as contraction, secretion, the formation of special metabolic products, etc. The second comprises the receptor substances which are especially liable to change and are capable of setting the chief substance in action. Nicotine, curare, pilocarpine, strychnine, and most other alkaloids, as well as the effective material of the internal secretions, produce their effects by combining with the receptor substances, and not by acting on the axone endings, if these are present, or by a direct action on the chief substance.

The variation in the effect of the sympathetic nerves upon the different forms of unstriated muscle is thus to be attributed to an inherent tendency to chemical variation in the cell protoplasm so that there are formed different receptor substances, the responsiveness of which to the nerve impulse varies.

The validity of this novel theory of drug action is well supported by recent experimental work on the action of adrenalin. T. R. Elliott (*Journal of Physiology*, July) has shown that the single characteristic of adrenalin is its aptness to stimulate plain muscle and gland cells that are or have been in functional union with sympathetic nerve fibres. In default of sympathetic innervation, plain muscle is indifferent to adrenalin. The stimulation takes place at the junction of muscle and nerve fibre, and the irritable substance at the myoneural junction depends for continuance of

life on the nucleoplasm of the muscle cell, not of the nerve cell.

The "myoneural junction" of Elliott would thus correspond to the "synaptic" substance of Langley. The researches of the latter bear out previous conceptions of the extreme complexity of the cell, and indicate with what wise provision the metabolic machinery of the cell has been kept quite separate from the part susceptible to external influences. A fuller study of the receptive side chains of the protoplasm may yield remarkable advances in pharmacology. Thus, it may yet be shown that the action of narcotics depends upon their union with the receptors of the cells, which, becoming more or less saturated or locked up, are prevented from uniting with other substances or from responding to physiological influence through the medium of the nerves.

THE RELATION OF HEART BLOCK TO STOKES-ADAMS DISEASE.

It is possible to produce heart block and the phenomena of Stokes-Adams disease in dogs by experimental methods. In 1903 His, Jr., showed that there was a narrow band of muscular tissue which joined the septum of the auricles with that of the ventricles. By experiments on dogs with a specially constructed clamp, Erlanger (*Journal of Experimental Medicine*, January 25th) has succeeded in producing complete or partial heart block at will. In a heart with complete block produced by pressure of the clamp on the auriculoventricular bundle of His, after the ventricles have emptied themselves, it may be seen that each contraction of the auricles sends a distinct wave into the ventricles, upon the subsidence of which the volume of the ventricles is seen to have considerably increased. After two or three such waves have occurred, the ventricles contract, but this contraction bears no constant time relation to the contraction of the auricles. The latter also sends a wave into the great veins. The change from complete to partial block, and *vice versa*, may be made by diminishing or increasing the amount of pressure on the auriculoventricular bundle. The blood pressure falls whenever the rate of the ventricular action is decreased and rises when it is increased. In any stage of partial block the auricles and the ventricles may be completely inhibited by stimulation of the vagus nerve. But when the block is complete, stimulation of the peripheral end of the vagus, although it inhibits the auricles, has little effect upon the ventricles, and the arterial pressure is either not affected or lowered slightly. On the other hand, stimulation of the accelerator nerves during complete

block produces a response in the ventricles. These facts, together with others of a more theoretical importance, give complete evidence that the impulses which normally cause the ventricles to contract pass through the region of the auriculoventricular bundle. Erlanger is of the opinion that the syndrome in man is produced by a lesion in the heart which gradually encroaches upon the auriculoventricular bundle. This opinion has recently received confirmation in the report of a case by Stengel (*American Journal of the Medical Sciences*, December) in which, at an autopsy on a subject who had died of the Stokes-Adams syndrome, there was found an atheromatous patch on the anterior leaflet of the mitral valve which had extended to the endocardium exactly over the auriculoventricular bundle.

In order to make the diagnosis of heart block, it is necessary to show that the ventricles more or less regularly fail to respond to one or more of the constantly recurring auricular impulses. While the most certain method of demonstrating this fact is by making tracings of the apex beat, the jugular pulse, and the arterial pulse, it is possible to make the diagnosis by the aid of the usual clinical methods alone. As syphilis may be one of the ætiological factors of Stokes-Adams disease, potassium iodide should be employed therapeutically. Furthermore, any disease of the mesial leaflet of the tricuspid valve, by putting this bundle under tension, may prevent the passage of normal impulses from auricles to ventricles. Atropine, by steadying the pulse rate, may tend to ward off attacks of syncope during the progress of the disease.

MEANS AND ENDS.

It may generally be observed that in their avocations men are quite as much charmed with their appliances as with the purposes that they are intended to serve. Note how fondly the violinist hugs his instrument, with what pride the fisherman caresses his tough but slender rod and gazes upon his store of flies, and how the hunter who comes home with an empty bag finds consolation in contemplating the beautiful mechanism of the gun that he carefully oils and tenderly lays away. So it is to some extent with the physician. Medicine is not a mere means of obtaining bread and butter; in some of its aspects it is truly an avocation, though therein of course it does not materially differ from many another pursuit that is followed mainly for a livelihood, but cultivated in its attractive aspects for its own sake. There is nothing alluring in dancing attendance on the sick, but investigation in medi-

cine is enticing. There need be no wonder, then, that those who have the time and opportunities for medical research find in it that satisfaction which the routine of practice seldom yields, or that they pet their microscopes, their thermostats, and their electrical apparatus. It is natural.

Though the great teachers of medicine, such men as Trousseau, Sir Thomas Watson, and Alonzo Clark, have not been preeminently laboratory men, they have founded their teaching on that which in their day answered to the more modern laboratory work—study in the dead house and with the microscope—and Clark, in particular, gave much time to microscopy. We can hardly doubt that they were as fond of their lenses and of their stage appliances as the research worker of the present day is of the more varied and elaborate apparatus with which he studies the problems to which he devotes himself. To some extent the busy general practitioner may be an investigator, and we believe that as a rule he is one—not perhaps in laboratory fashion, but in some way quite as precise as the laboratory man follows and with appliances for which he comes to feel a special fondness. It is such a feeling that distinguishes the sportsman from the pot hunter.

We have been moved to these reflections by the recent opening of a new laboratory building for the use of the New York board of health. It is well for all such bodies to be provided with appliances that they will hold dear, for in no other way can the spirit of research be more readily stimulated or more steadily sustained.

FOUR ATTACKS OF PNEUMONIA WITHIN A YEAR.

Recurrent pneumonia is not among the pronounced rarities, but it may be doubted if recurrence with the features recorded recently by Lépine and Froment (*Revue de médecine*, January) is at all common. The patient was a baker, forty-two years old. On April 15, 1904, he was attacked with pneumonia of the base of the right lung; on December 30, 1904, he had pneumonia of the right apex; on February 1, 1905, he had pneumonia of the left apex; and on March 8, 1905, he was seized with pneumonia of the right apex. On the last occasion the physical signs were tardy in making their appearance. A brother of the man had died tuberculous, and the patient himself was addicted to alcohol, consuming about a gallon of wine and two drinks of absinthe daily. The authors call attention to the facts that Andral observed fifteen attacks of pneumonia in the

same individual in the course of eleven years, that Chomel attended a patient in his tenth attack of the disease, and that Rust noted twenty-eight pneumonic seizures in one person.

It was noteworthy that in the case of Lépine and Froment's patient the defervescence was invariably by lysis, and that it was rather slow, the temperature requiring three days to fall to normal, except in the fourth attack, in which the subsidence was a little more rapid. It was remarkable, furthermore, that in each attack fresh pulmonary territory was attacked—that is, a portion of the lung different from the one affected in the seizure next preceding. Twice the disease showed itself in the right apex, but between the two seizures there was one affecting the left apex. According to Grisolles, it is stated, out of thirty-five recurrent attacks of pneumonia, twenty-five affected the lung first attacked. In a child observed by von Ziemssen, pneumonia occurred four times within five years, and in three instances it attacked the lower lobe of the left lung, affecting the upper lobe of the right lung only once. Charcot has reported the case of a person who had eight attacks of pneumonia in the course of six years, seven of them in the left lung and only one, the last and fatal one, in the right. In another case reported by Charcot there were four attacks in three years, and three of them were in the right apex. The recorded cases are, of course, insufficient in number to warrant us in formulating any very definite law of recurrence, but similar instances ought all to be reported, in order that we may ultimately arrive at something approaching such a law.

GENIUS AND ITS PATHOLOGY.

Whether in the carelessly accepted phrase that "genius is akin to insanity" or in Lombroso's deliberate statement that it has an insane or epileptoid basis, the belief in the more or less pathological character of genius has a widespread, although perhaps not very serious, credence. This lends a general interest to Mr. Havelock Ellis's recent publication of his *Study of British Genius*, in which he has made a biological study of the lives of a thousand eminent men of Great Britain.

Aside from the question of insanity, interest centres mainly in gout, traditionally the scholar's malady, and in tuberculous disease, so often associated in the popular mind with the artistic temperament. No less than five per cent. of these great men suffered from gout, among them Darwin, Gibbon, Harvey, Johnson, Milton, and Pitt, all of a decidedly masculine and robust genius.

News Items.

NEW YORK CITY AND STATE

Personal.—Dr. Frederic Griffith, of New York, is in Panama as a special correspondent.

The Middleton Goldsmith lecture was delivered before the New York Pathological Society by Dr. Ludwig Hektoen, of Chicago, on Friday evening, February 23rd, on the subject of Phagocytosis.

The Associated Alumni of the Mount Sinai Hospital held their annual dinner at the Harmonie Club, 10 East Sixtieth Street, on Wednesday evening, February 21st. A musical programme and addresses were the features of the occasion.

The Harvey Society.—The tenth lecture in the Harvey course will be delivered at the New York Academy of Medicine, on Saturday, February 24th, at 8.30 p. m., by Professor Charles S. Minot, of Harvard Medical School, on the subject, *The Nature and Cause of Old Age*.

The Medical Society of the County of Albany.—At a meeting held on Wednesday, February 14th, Dr. Willis G. Macdonald presented a patient who had recovered from a fracture of cervical vertebrae that he had sustained in November, 1905. A paper on the different forms of Goitre was read by Dr. G. E. Beilby, of the Bender laboratory.

The Saratoga (N. Y.) Medical Society.—The following programme was arranged for a meeting held on Friday, February 16th: *The Treatment of Pneumonia*, by Dr. J. T. Sweetman; *The Treatment of Scarlet Fever*, by Dr. E. A. Palmer; discussion by Dr. J. B. Ledlie and Dr. F. J. Resseguie.

The Buffalo Academy of Medicine.—The programme for a meeting of the Section in Medicine, held on Tuesday, February 20th, included the following titles: *Longevity Among Yale Athletes*, by Dr. William G. Anderson, Director Yale University Gymnasium, New Haven, Conn.; *Functional Derangement of the Heart*, by Dr. James S. Smith.

The Attending and House Staffs of the Mount Sinai Hospital hold monthly clinical conferences at the hospital on the fourth Thursday evening. On Friday evening, February 17th, a special meeting was held, at which Dr. E. Libman, assistant pathologist, presented a paper on *Bacterial Sepsis*, representing a summary of the work of the laboratory in this direction for the past seven years.

The Syracuse Academy of Medicine.—The following programme was arranged for a meeting held on Tuesday, February 20th: *Report of a Case of Variola Hemorrhagica*, by Dr. Robert Burns; *Observations on a Case of Arteriosclerosis*, by Dr. B. C. Loveland; *A Pendulous Abdomen in Obstetrics*, by Dr. Frank Reynolds; *Report of a Case, with Specimen*, by Dr. F. R. Johnson.

The Section in Laryngology of the New York Academy of Medicine will hold a meeting on Wednesday, February 28th, when the following programme will be presented: *Presentation of patients. Papers: Rheumatic Cricothyroid Ankylosis*; with *Report of a Case*, by Dr. H. P. Mosely; *The Technic of the Submucous Resection of the Septum*, by Dr. S. Yankauer. *Presentation of specimens and instruments.* Executive session.

The Newburgh Bay (N. Y.) Medical Society.—By invitation of the president, Dr. R. B. Lamb, the society met at the Matteawan State Hospital on Tuesday, February 13th. After a collation, the following programme was presented: *An address on Diseases of the Heart*, by Dr. Alexander Lambert, of New York City and an address by Dr. M. G. Schlapp, of New York city, on *The Explanation of Symptoms of Nervous Disease*, illustrated by stereopticon pictures.

The American Laryngological, Rhinological and Otolaryngological Society.—The eastern section of this society held its annual meeting at Syracuse, on Saturday, February 10th. The programme included the following titles: *The Clinical Value of the Differential Blood Count Demonstrated in a Case of Acute Brain Abscess*, and in a *Case of Acute Double Mastoiditis*, by Dr. W. P. Brandegee, of New York; and *Difficulties of Diagnosis of Sinus Thrombosis*, by Dr. Talbot R. Chambers, of Jersey City. In the after-

About four per cent. fell victims to tuberculous disease, and these chiefly preeminent in artistic and literary fields. Yet before one permits these facts to strengthen the traditional association of gout with erudition and consumption with art, he must remember that, on the one hand, recognition in such directions as that gained by the men mentioned generally comes at precisely the time of life when gout is most prevalent, and, on the other hand, that artistic achievements often flash out in youth and reach perhaps their acme of inspiration before the age which statistics show as giving the greatest fatality from consumption. No one can tell how many of those unknown victims of the great white plague might have been classed among the great scholars and scientists if they had lived, or how many of them might have acquired gout along with their fame.

In the matter of mental disorder barely more than four per cent. have suffered from definite insanity, including terminal senile dementia. This surely is not a disproportionate number, and the fact that the wives of these notable men give very nearly the same statistical proportion, taken in conjunction with the proverbially commonplace intellect of the wives of men of genius, would seem to divest this incidence of insanity of any particular significance in the question under consideration. Ascending or descending insane heredity is recorded in less than two per cent., and epilepsy but twice in the whole number. Serious nervous disorders are also extremely rare.

Thus far the evidence would seem rather to support the view of Galton, that genius is merely a normal variation rather than the other extreme of Lombroso. But Mr. Ellis does not entirely agree with either. While denying any essential connection with insanity, he believes that it is rarely strictly normal, requiring, to his mind, a peculiar nervous system, sensitively adjusted along some lines and possessing concomitant defects in others. Thus genius is more nearly analogous to congenital defect than to insanity. In support of this view he cites the prevalence among the men studied of functional abnormalities, stammering, tics, involuntary movements, and in some cases simplicity of mind and incapability of perception in other than their own special line. Thus from the man of comprehensive genius we grade down through the man whose originality is limited by one idea, the calculator and the idiot savant to the ordinary imbecile.

The Treatment of Locomotor Ataxia.—Bond suggests for the lightning pains heat or cold, with chloroform or ether upon the hyperæsthetic areas, methyl chloride, x rays, sinapisms, opium, or belladonna plasters, or electricity.—*The Practitioner*.

noon, Dr. T. H. Farrell, of Utica, was to present a case for diagnosis.

The Late Dr. George Ryerson Fowler.—A memorial service for the late Dr. Fowler was held at the First Reformed Church, in Brooklyn, on Sunday evening, February 18th. Bishop Edward G. Andrews presided at the service. Eulogies were pronounced by the Reverend Dr. J. M. Buckley, president of the board of managers of Seney Hospital; Dr. Lewis S. Pilcher, president of the medical board of Seney Hospital; Dr. William F. Campbell, president of the Medical Society of the County of Kings; Dr. St. Clair McElway, chairman of the board of regents of the State of New York; and the Reverend Dr. A. S. Kavanagh, superintendent of Seney Hospital. A special musical programme was given by the choir, the selections including many of Dr. Fowler's favorite hymns.

The Linnæan Society of New York.—At a meeting to be held at the American Museum of Natural History, on Tuesday evening, February 27th, Dr. William C. Braislin will read a paper entitled, *The Birds of Prospect Park, Brooklyn*. The society has arranged for a course of four public lectures, to be given on Wednesday evenings of the following dates: February 21st, *The Tortugas Marine Laboratory of the Carnegie Institution; Its Aims and Problems*, by Alfred G. Mayer, director of the laboratory; March 7th, *New Zealand Bird Life*, by Edgar T. Stead, of Christchurch, New Zealand; March 14th, *A Naturalist's Camping Trip to Hudson Bay*, by Dr. Robert T. Morris, of New York City; March 21, *Bird Hunting with a Camera*, by Clinton G. Abbott, of New York City.

The Brooklyn Medical Journal.—Rumors to the effect that Mr. G. L. Harrington, business manager of this journal, has become connected with the *New York State Journal of Medicine*; that the two journals have become consolidated, and that the *Brooklyn Journal* will cease publication, are absolutely without foundation in fact. An effort was made to effect a consolidation, but an agreement could not be reached. The office of the *Brooklyn Journal* has been moved to Room 223, Eagle Building, Brooklyn, and the *New York State Journal* has established its publication office in the quarters formerly occupied by the *Brooklyn Journal*. That journal was never in so prosperous a condition as it is at the present time. The sentiment among the profession of Brooklyn is decidedly adverse to discontinuing the *Journal*.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending February 17, 1906:

	February 17.		February 10.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	1,674	37	1,390	49
Diphtheria and croup	371	62	432	49
Scarlet fever	198	11	215	16
Small-pox	1	..	..	..
Chicken-pox	100	1	151	..
Tuberculosis	323	176	349	161
Typhoid fever	50	10	34	7
Cerebrospinal meningitis	30	21	20	17
	2,732	318	2,591	299

Society Meetings for the Coming Week:

MONDAY, February 26th.—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, February 27th.—New York Medical Union (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Va., Academy of Medicine and Surgery; Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, February 28th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; New York Dermatological Society (private); American Microscopical Society of the City of New York; Philadelphia County Medical Society; Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

THURSDAY, March 1st.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of

the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of the City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, March 2nd.—Manhattan Clinical Society; Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, March 3rd.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

PHILADELPHIA AND THE MIDDLE STATES

Personal.—Mr. J. E. Ellis, for the past six years superintendent of the Medicochirurgical College Hospital, has resigned and will go to New Orleans as superintendent of the Touro Hospital.

The Clinical Society of the Elizabeth (N. J.) General Hospital and Dispensary.—The programme for a meeting of this society, held on Tuesday, February 20th, included a paper on *Some of the Commoner Forms of Acute Peritonitis*, by Dr. M. A. Shangle.

Pennsylvania State Board of Medical Examiners.—On Thursday, February 15th, Governor Pennypacker sent the following names to the Senate as nominees to the State Board of Medical Examiners: Dr. Henry Beates, Jr., of Philadelphia; Dr. Robert W. Ramsey, of Chambersburg, and Dr. Francis R. Packard, of Philadelphia.

Scientific Society Meetings in Philadelphia for the Week Ending March 3, 1906.—Monday, February 26th, Mineralogical and Geological Section, Academy of Natural Sciences; Society of Normal and Pathological Physiology, University of Pennsylvania. Tuesday, February 27th, Philadelphia Neurological Society. Wednesday, February 28th, Philadelphia County Medical Society. Thursday, March 1st, Obstetrical Society; Medical Society of the Southern Dispensary; Section Meeting, Franklin Institute. Friday, March 2nd, American Philosophical Society.

The Health of Philadelphia.—During the week ending February 10, 1906, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever	361	29
Scarlet fever	66	1
Chicken-pox	13	0
Diphtheria	103	11
Cerebrospinal meningitis	4	3
Measles	699	20
Whooping-cough	40	8
Tuberculosis of the lungs	229	52
Erysipelas	150	94
Epidemic	16	1
Puerperal fever	2	2
Trachoma	1	0
Tetanus	1	1
Hydrophobia	1	0
Mumps	16	0
Croup	23	27

The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 3; dysentery, 2; cholera morbus, 1; diarrhoea and enteritis, under two years of age, 25. The total deaths were 584, in an estimated population of 1,469,126, corresponding to an annual death rate of 20.67 in 1,000 population. The total infant mortality was 155; under one year of age, 104; between one and two years of age, 51. There were 28 still births; 16 males and 12 females. The temperatures were low, the thermometer reaching + 8° on the sixth.

BOSTON AND NEW ENGLAND.

Personal.—Dr. J. H. Wight, of Bethel, Maine, has been appointed surgeon of the Grand Trunk Railroad.

The Hartford (Conn.) City Hospital.—Dr. W. H. Smith, recently connected with the Kingston Avenue Hospital, of Brooklyn, has been appointed superintendent of the Hartford Hospital.

The Androscoggin (Me.) County Medical Association.—At a meeting held at Auburn, on Friday, February 16th, the programme included a paper on *The Application of Electricity to the Practice of Medicine*, by Dr. Robert Wilson, of Montreal, Canada.

The Alumni House Pupils of the Massachusetts General Hospital will hold a meeting on March 24, 1906, for the purpose of effecting a definite organization. In the afternoon there will be demonstrations in the wards and laboratories of the hospital and operations in the amphitheatre. A dinner will be given in the evening.

The Alumni Association of the Boston City Hospital.—The annual meeting and dinner was held on Wednesday, February 7th. Dr. George A. Leland, of Boston, was elected president. Speeches were made at the dinner by Dr. Samuel Mixter, Dr. Paul Thorndike, Dr. John G. Blake, and President Eliot of Harvard University.

The Maine Academy of Medicine and Science.—At a meeting held at Portland, on Wednesday, February 14th, the question of discontinuing the meetings of the academy was discussed. By a unanimous vote it was decided that the meetings should be continued as heretofore. The officers of the academy are: President, C. W. Peaslee; corresponding secretary, Dr. A. H. Little; recording secretary, Dr. F. Y. Gilbert; assistant secretary, Dr. G. A. Pudor; treasurer, Bertrand G. March; librarian, Dr. F. W. Searle; assistant librarian, Miss Edwards.

The Massachusetts General Hospital.—The annual meeting of the corporation of the Massachusetts General Hospital was held on February 7th and the following officers re-elected: President, Charles H. Dalton; vice-president, Francis C. Lowell; treasurer, Franklin Haven; secretary, Charles H. W. Foster; trustees on part of corporation, Francis H. Appleton, Francis Blake, Charles H. W. Foster, Francis L. Higginson, Nathaniel Thayer, Henry P. Walcott, George Wigglesworth, and Moses Williams.

The Mortality of Connecticut.—According to the State Board of Health's *Monthly Bulletin*, for January, 1906, the total number of deaths during the month was 1,331. This was 13 more than in December, and 81 less than in January of last year, and 45 less than the average number of deaths during January for the five years preceding. The death rate was 16.8 for the large towns, for the small towns 14.3, and for the whole State 16.2. The deaths reported from infectious diseases were 210, being 15.7 per cent. of the total mortality.

The College of Physicians and Surgeons of Boston.—Dr. Heinrich Stern, of New York, who occupies the chair of special medical pathology and therapy in this college, has opened his annual course of lectures. The course, which commenced on Monday, February 5th, will be continued on Mondays through the months of March and April. The subject of the first lectures was Diseases of the Heart and Vascular System. Other subjects will be The Lymphatic System, Diseases of Metabolism, Gastrointestinal Diseases, Diseases of the Kidneys, and of the Blood. The lectures are given before the senior class, but are open to the profession and many physicians avail themselves of the privilege.

The Mortality of Boston.—The number of deaths reported to the Board of Health for the week ending February 10th, was 244, as against 233 the corresponding week last year, showing an increase of 11 deaths, and making the death rate for the week 21.38. The number of cases and deaths from infectious diseases was as follows: Diphtheria, 56 cases, 4 deaths; scarlatina, 28 cases, no deaths; typhoid fever, 4 cases, 2 deaths; measles, 182 cases, 5 deaths; tuberculosis, 49 cases, 37 deaths; smallpox, no cases, no deaths. The deaths from pneumonia were 35, whooping cough 3, heart disease 30, bronchitis 5, marasmus 4. There were 16 deaths from violent causes. The number of children who died under one year of age was 43, under five years of age 65, persons over sixty years of age 43, deaths in public institutions 89.

The Hygiene of the Japanese Army.—At a meeting of the Boston Medical Library Society, in conjunction with the Suffolk District Branch of the Massachusetts Medical Society, held at the library on Wednesday, February 14th, Captain Charles Lynch, assistant surgeon in the United States Army, read a paper on this subject. In December, 1904, Captain Lynch was detailed as military attaché with the Japanese Army under the command of General Oku, for the purpose of inspecting the methods employed by the Japanese medical department for the prevention of disease

and the care of the sick and wounded. In the course of his paper Captain Lynch explained in detail the general organization of the medical department and how the difficulties of the past had been overcome. He said that there was always a large reserve medical force which in itself was an important factor in the success of the army. The younger men were in charge, and, when necessary, the older men of the reserve were called upon for consultation. Captain Lynch stated that in details and the technics of surgery the Japanese were far behind the profession of this country; but in general hygiene and executive ability they were as much in advance. He described the field hospitals and spoke particularly of the great work done by the Japanese Red Cross Society. After the reading of the paper a series of interesting photographs was shown, illustrating what had been spoken of.

BALTIMORE AND THE SOUTH.

The Chatham (Ga.) County Medical Society of Savannah.—At a meeting of this society, held on February 14th, Dr. George R. White read a paper entitled, Gallstones from a Surgeon's Standpoint.

The Richmond (Va.) Academy of Medicine and Surgery.—At a meeting of this academy, held on Thursday, February 15th, the subject for discussion was Stone in the Kidney and Pyelitis. Dr. B. Laurence Taliaferro was to discuss Diagnosis and Dr. Louis C. Bosher was to discuss Treatment. At the next meeting of the academy, to be held on Friday, February 23rd, the subject for discussion will be Habitual Constipation. The discussion will be opened by Dr. Mark W. Peyser.

The Mortality of Baltimore.—The report of the health department for the week ending February 10th, shows a total of 230 deaths, as compared with 221 the corresponding week of last year; 244 in 1904; and 215 in 1903. Of the deaths during the week thirty-nine were the result of consumption. The annual death rate in a thousand of population was: Whole, 20.87; white, 18.37; colored, 34.27. The principal causes of death were: Typhoid fever, 1; whooping cough, 2; diphtheria, 2; membranous croup, 1; influenza (la grippe), 3; consumption, 39; cancer, 7; apoplexy, 8; organic heart diseases, 21; bronchitis, 8; pneumonia, 36; Bright's disease, 24; congenital debility, 9; lack of care, 7; old age, 4; suicides, 2; homicide, 1; accidents, etc., 13. The nativity of the decedents was: United States, white, 133; foreign, 35; colored, 57; unknown, 5. The following number of cases of infectious diseases was reported, as compared with the corresponding week of last year:

	1905.	1906.
Smallpox	0	6
Diphtheria	20	13
Pseudomembranous croup	0	1
Scarlet fever	10	14
Typhoid fever	3	8
Measles	18	3
Mumps	4	2
Whooping cough	0	14
Chickenpox	9	5
Consumption	14	8

CHICAGO AND THE WEST.

The San Francisco (Cal.) County Medical Society.—The following programme was arranged for a meeting held on Tuesday, February 13th: The Role of Hydrotherapy in Chronic Diseases, by Dr. Simon Baruch, of New York (by invitation); The Dietetic and Physical Treatment of Cardiac Dropsy, by Dr. Alfred W. Perry; Dr. Baruch's paper was to be discussed by Dr. Sanderson, Dr. Evans, and others.

The Mortality of Michigan During January, 1906.—The total number of deaths returned to the Department of State for the month of January, was 2,968, representing a total death rate of 13.6 in 1,000 population, as compared with a rate of 12.4 for December. There were 544 deaths of infants under 1 year of age, 181 deaths of infants aged 1 to 4 years, and 943 deaths of persons aged 65 and over. Important causes of deaths were as follows: Tuberculosis of the lungs, 209; other forms of tuberculosis, 24; typhoid fever, 46; diphtheria and croup, 63; scarlet fever, 18; measles, 19; whooping cough, 27; pneumonia, 288; diarrhoeal diseases of infants under two years of age, 44; influenza, 39; cancer, 135; accidents and violence, 150. There were no deaths reported from smallpox during the month.

Statement of Mortality in Chicago for the Week Ending February 10, 1906, compared with the preceding week, and with the corresponding week of 1905. Death rates computed on United States Census Bureau's midyear populations—2,049,185 for 1906 and 1,990,750 for 1905:

	Feb. 10, 1906.	Feb. 3, 1905.	Feb. 11, 1905.
Total deaths, all causes.....	566	557	554
Annual death rate in 1,000.....	14.34	14.16	14.50
Sexes			
Males.....	324	314	319
Females.....	242	243	235
Ages			
Under 1 year of age.....	122	117	123
Between 1 and 5 years of age....	54	84	82
Between 5 and 20 years of age....	35	36	38
Between 20 and 60 years of age....	236	244	208
Over 60 years of age.....	118	126	103
Important causes of death			
Apoplexy.....	14	10	19
Bright's disease.....	39	42	32
Bronchitis.....	21	8	40
Consumption.....	60	63	68
Cancer.....	31	31	21
Convulsions.....	11	13	14
Diphtheria.....	11	12	11
Heart diseases.....	42	39	37
Influenza.....	3	8	12
Intestinal diseases, acute.....	27	32	20
Measles.....	1	0	8
Nervous diseases.....	19	29	21
Pneumonia.....	118	103	118
Scarlet fever.....	7	7	3
Smallpox.....	0	0	2
Suicide.....	7	11	8
Typhoid fever.....	4	4	4
Violence (other than suicide).....	29	29	22
Whooping cough.....	0	0	10
All other causes.....	122	115	84

The 566 deaths from all causes reported during the week—nine more than during the previous week and twelve more than in the corresponding week of last February—represent an annual rate of 14.34 in a thousand of population. If maintained during the month, February, 1906, will be next to the lowest on record for any February. The lowest previous was 14.33 in 1901; the highest during the decade was 17.95 in 1895, and the average of the decade was 16.59.

GENERAL.

A New Journal.—A new medical journal, devoted to the study of the physiology and pathology of metabolism, the *Zentralblatt für die gesamte Physiologie und Pathologie des Stoffwechsels*, edited by Professor von Noorden, Dr. A. Schittenhelm, and Dr. E. Schrieber, has just appeared from the press of Urban and Schwarzenberg.

The Twenty-third Congress for Internal Medicine will be held at Munich on April 23 to 26, 1906, under the presidency of Dr. Von Strümpell, of Breslau. The subject for discussion on the first day will be The Pathology of the Thyreoid, to be opened by Dr. Kraus, of Berlin, and Dr. Kocher, of Bern. The second day's subject will be, Irregularity of the Action of the Heart, by Dr. Hering, of Prag. Papers will be read by Dr. Jacob, of Cudowa; Dr. Feinberg, of Berlin; Dr. Aronsohn, of Ems; Dr. Brickel, of Berlin; Dr. Pässler, of Dresden; Dr. Dietlen, of Giesen; Dr. Ebstein, of Eisenbach; and Dr. P. Krause, of Breslau. Announcements of papers to be read should be sent to Dr. Emil Pfeiffer, 13 Parkstrasse, Wiesbaden. In connection with the congress there will be an exhibition of everything pertaining to internal medicine. Intending exhibitors are requested to notify Professor F. Müller, 6 Bavariaring Munich.

The Fifteenth International Medical Congress.—The meeting of the International Medical Congress which will be held in Lisbon from the 19th to the 26th of April bids fair to be a far greater success than had been anticipated. Already large numbers of physicians and surgeons from England, France, Germany, Austria-Hungary, Spain and Italy have signified their intention of being present and participating in the congress. The number of congressists from this country, as well as the number of titles of papers, is slowly increasing. The honorary presidents of the congress from the United States are: Dr. Nicolas Senn, of Chicago, Ill.; Dr. Lewis S. McMurtry, of Louisville, Ky., and Dr. Albert Vander Veer, of Albany, N. Y. More than fifty American physicians have signified their intention of attending the congress. The following are some of the titles received: Portable Rations for Soldiers in Battle and on the March, by Dr. L. L. Seaman; What Are the Scientific Proofs at Present of the Parasitic Nature of Neo-

plasms, Especially Cancer, by Dr. Harvey Gaylord; The Intermediary in Yellow Fever, by Col. W. C. Gorgas; Septic Peritoneal Infections, by Dr. John B. Murphy; Choice of Anesthesia in the Extraction of Teeth, by J. F. Hasbrouck; Status of the Hospital Ship in War, by Dr. J. C. Wise; Bubonic Plague, from Personal Experience in Hong Kong, by Dr. Carl Brownell; Cinematograph Pictures of Pathological Movements (epileptic seizures, choreic movements and nervous gaits), by Dr. Walter G. Chase; Diseases of the Digestive Organs in the Pathogenesis of Arterial Hypertension, by Dr. G. W. McCaskey; Ulcer of the Stomach, with Pathogenesis and Pathology, by Dr. Fenton B. Turck; Tent Treatment, etc., by Dr. A. E. Macdonald; Cerebromental Neurasthenia or Psychic Cerebrasthenia, by Dr. C. H. Hughes; Lateral Section of the Pubis in Persistent Menoposterior Positions, by Dr. E. B. Montgomery; Cæsarian Section, by Dr. A. D. Davis; Some Legal Aspects of Epilepsy, by Dr. H. C. B. Alexander; Spontaneous and Criminal Abortions from a Medicolegal Point of View, by Dr. A. Vander Veer; The Use of High-frequency Currents in Skin Diseases, by Dr. Charles W. Allen; Gonococcus Infection in Young Children, Particularly in Institutions, by Dr. L. Emmett Holt; The Preventive and Nonoperative Treatment of Splanchnoptosis, Based on New Ætiological Factors, by Agnes C. Vietor; Punctate Forms of Retinitis, by Dr. H. Gradle; The Conservation of Surgery, by Dr. J. E. Cannaday; Preventive Legislation Against Tuberculosis, by Mr. Clark Bell. For information concerning transportation arrangements, address Dr. Charles Wood Fassett, St. Joseph, Mo. Ramon Guiteras, Secretary, American National Committee.

A Uniform Equipment in the Medical Departments of the Army and Navy.—In the appointment by the President, as noted in these columns recently, says the *Army and Navy Journal* for January 27th, of a committee composed of officers of the army and navy "to consider improvements in the matter of first aid dressings and the advisability of the adoption of a uniform equipment in the medical departments of the army and navy," a step has been taken which may lead to results of substantial value to both services. There is reason to believe that legislation will be enacted during the present session of Congress providing for the needful increase in the medical corps of both the army and the navy and for a somewhat more liberal treatment of their individual members. The need of such legislation is generally admitted and its enactment will be a measure of sound policy as well as a matter of simple justice. In spite of the limitations which hamper their work, the medical departments of both services are doing everything possible to improve their efficiency. The army medical school and the navy medical school are both well organized and are doing much for the young surgeons who after passing their examinations for commissions are entered at the schools for post graduate instruction. While that instruction is devoted principally to military surgery and medicine, military diseases, chemistry, sanitation, hygiene, and related subjects, it necessarily embraces a course in military and international law, administrative duties, tactics, signals, and other subjects. These schools being located in Washington and possessed of limited facilities for clinical work and other practical instruction, may prove inadequate to the requirements that will naturally arise from a considerable increase in the two medical corps. It has therefore been suggested that young surgeons who have passed their examinations for commissions be sent to the service medical schools for the post graduate course in theoretical instruction and afterward to the great hospitals of Baltimore, Philadelphia, New York, and other large cities for practical training in surgery and medicine. The feasibility of such an arrangement can be determined by the medical authorities alone, but one of its advantages would be to give the student officer a broader experience in clinical work under modern hospital administration than is open to him in Washington. What he needs probably is not a post graduate course in theoretical study, but actual experience in handling patients, both surgical and medical, in hospitals under the supervision of competent teachers. The opportunities for such work are nowhere so inviting as at the famous hospitals of our great cities. Those institutions already play an important part in medical instruction in civilian colleges and universities, and it might be worth while to inquire whether they could not be made equally useful in training young surgeons for the military services.

Pith of Current Literature.

AMERICAN MEDICINE.

January 17, 1906.

1. Puerperal Infection: Report of Six Cases Illustrating Its Varied Character, By ELLICE McDONALD.
2. Congenital Malformations of the Heart; A Series of Cases, By ALLEN G. ELLIS.
3. Cleansing of Milk Vessels: Relative Value of Washing Powders, By A. H. STEWART.
4. Facts About Eating, By JOHN WARREN ACHORN.
5. Typhoid Fever: How Can It be Eliminated? By JOHN L. HEFFRON.
6. Abscess of Antrum Causing Symptoms of Acute Articular Rheumatism, By K. K. WHELOCK.

1. **Puerperal Infection: Report of Six Cases Illustrating Its Varied Character.**—McDonald reports six cases from which he draws the conclusions that while streptococcus infection is usually the most common and severe type of puerperal infection, other organisms which otherwise produce clinically mild symptoms may run a severe course and cause death. Autoinfection from the genital canal is probably more common than is generally supposed, where Bumm and Sigwart found the streptococcus to be present in more than 38 per cent. of their cases; of the women having streptococci 20.4 per cent. also had fever. The term puerperal infection should, therefore, be broadened to include infection elsewhere than in the uterus and the location and nature of such lesions should be recognized before any operative measures are undertaken. This can only be done by exact physical examination of urine, blood, etc. The author warns against curetting, saying the utter futility and even harmfulness of curetting, if attempted in such cases as those he reported, is readily seen.

2. **Congenital Malformations of the Heart; a Series of Cases.**—Ellis thinks that the influence of heredity in the production of malformations of the heart appears to be positive. He narrates four cases and cites one case reported by Bomet.

3. **Cleansing of Milk Vessels: Relative Value of Washing Powders.**—Stewart is of the opinion that the disinfection of dirty, disease carrying milk cans is a problem which needs a vigorous action from the health authorities as does the disinfection of houses. This has been removed from the hands of the householder for the better protection of citizens and has been given under the care of the health authorities. The establishment of a plant for cleaning the milk carrying vessels under the supervision of the health authorities would be from the author's view of great help.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

February 15, 1906.

1. The Problem of Psychiatry in the Functional Psychoses, By EDWARD COWLES.
2. Serious Head Injuries and the Indications for Operative Treatment, By B. SACHS.
3. Head Injuries, By MORTON PRINCE.
4. Indications for Operations in Head Injuries, By WILLIAM N. BULLARD.
5. Brain Injuries, By HENRY C. BALDWIN.
6. A Case of Adiposis Dolorosa, By E. W. TAYLOR and J. S. LUCE.

2, 3, 4. **Serious Head Injuries and the Indications for Operative Treatment.**—Sachs reports several cases of injuries to the skull and thinks that if there is extensive injury to the skull, particularly in the parieto-temporal region if there is evidence of splintering of the inner table, or of the presence of a foreign body or of persisting intracranial hæmorrhage, operative interference is warranted at the earliest possible moment. X ray examinations in these cases and lumbar punctures will be valuable diagnostic aids. In all cases,

but especially in those in which external injury cannot be taken to be the determining factor, the question of surgical interference must be decided on purely neurological lines. It is important to decide whether the brain has or has not been tangibly injured; and if injured, whether the site of the injury is on or near the surface; in short, whether it is accessible or not. If inaccessible, simple trephining may be resorted to provided there are symptoms of increasing intracranial pressure which cannot be relieved by lumbar puncture or other simpler methods. If the symptoms point to distinct focal lesion, although years may have elapsed since the initial injury, surgical measures must be adopted, providing only that the lesion be accessible. If the external injury points to one site and the symptoms to another, both should be considered, but the site of the external injury should be first attacked. The author has left out intentionally fractures on the base of the skull, in view of the excellent paper published in the *Annals of Surgery*, by Dr. Walton, in 1904. These are included in Dr. Pruce's paper, who says that the greatest difficulty in determining the exact pathological lesions present, and therefore the advisability of operation is met with in those cases that are unconscious from the beginning. When the accident does not result immediately in unconsciousness, or, if it does, when the unconsciousness is only temporary and then after a normal interval unconsciousness develops, the case is simple enough. Here the interval of normal consciousness is a plain indication, not only that the latest succeeding unconsciousness is due to a secondary hæmorrhage, but that the brain tissue itself was not seriously bruised, lacerated or otherwise injured by the traumatism. But when the injury is followed immediately by persistent unconsciousness, it is often impossible to determine whether the coma and other cerebral symptoms are due to a hæmorrhage, or contusion, or laceration, or all three. The advisability of operation must depend upon the nature of the blow, the general symptoms, the neurological indications and the surgical evidence of injury to the skull. Bullard, in the third paper on this subject, is of the opinion that compound fractures of the external surface of the cranium should be operated in adults, if there are no serious contraindications, such as the conditions of the heart, the kidneys, or other injuries to the patient. In depressed fractures in adults the same course should be followed. In children it is sometimes permissible not to operate in such cases, where no symptoms exist. But if we have no absolute evidence of such fractures by sight or touch, we must follow certain indications or symptoms, such as middle meningeal hæmorrhage, long unconsciousness, persistent unilateral convulsions, cerebral or meningeal paralysis, inequity of the pupils, slow pulse, or a rise of temperature. In such cases where the patient is unconscious operation is only justifiable when all other ordinary causes for the condition are excluded.

6. **A Case of Adiposis Dolorosa.**—Taylor and Luce describe a case which was under their observation for nearly four years. The patient suffered from alcoholic neuritis, followed by diffuse distribution and characteristic pain of the fatty deposits. These deposits were preceded and followed by certain mental developments. There is no sign of dementia, but the variety of her moods should be regarded as pathological. This disease was first described by Dercum in 1888 and received in 1892 the name adiposis dolorosa. The ætiological factors seem to be neurotic heredity, alcoholism, and traumatism. The mechanism of the production of the fat seems to be nervous, and that the thyroid gland may have a share is probable, but not proved. The treatment by thyroid preparations has been occasionally beneficial, it was not so in this case. The disease still awaits a satisfactory explanation.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

February 17, 1906.

1. The Essentials of Successful Public Health Administration, By A. C. ABBOTT.
2. National Quarantine a Reasonable Function of the Government, By L. V. SEXTON.
3. Ulceromembranous Angina (Vincent's Angina) and Stomatitis, By GEORGE H. WEAVER and RUTH TUNNICLIFF.
4. Preparation of a Serum for the Treatment of Exophthalmic Goitre, By S. P. BEEBE.
5. The Treatment of Exophthalmic Goitre by a Specific Serum, By JOHN ROGERS.
6. Surgical Treatment of Goitre, By ROBERT WALLACE HARDON.
7. Mucocoele of the Appendix, with Report of a Case Possibly Carcinomatous in Nature, By ALFRED STENGEL.
8. Plexiform Neurofibroma, By FRANK B. WYNN.
9. Etiology and Preventive Treatment of Scarlatinal Nephritis, By H. LOWENBERG.

2. **National Quarantine a Reasonable Function of the Government.**—Sexton points out the advantages of a National quarantine over the present varying and often hostile regulations adopted by the different States. Uniformity of detention could be one of these, and perhaps international cooperation might be another. It would equalize the burdens so that one community would not have to be at excessive charges because of the neglect of others. Finally he mentions the evils of political control in local management of quarantine, which could be done away with by efficient management by United States officers under civil service laws or under the control of the Public Health and Marine Hospital Service or the medical service of the army or navy.

3. **Ulceromembranous Angina (Vincent's Angina) and Stomatitis.**—Weaver and Tunnicliff call the attention to ulceromembranous angina, usually occurring in young individuals and due to a peculiar fusiform bacillus, commonly associated with a spirillum. There is rarely much, if any, fever, the lesions being sometimes only accidentally discovered, as the symptoms are so insignificant. Usually the local condition is observed after from one to five days of premonitory signs, lassitude, throat discomfort, etc., while its chief symptoms are dysphagia, salivation, and foetid breath. With the oral and tonsillar lesions there may be swollen glands, earache, and nasal discharge. It seems as if the disease was contagious. The prognosis is in young children bad, while in elder individuals good. As regards to treatment potassium chlorate, tincture of iodine, silver nitrate, or hydrogen peroxide locally, have been advised.

4, 5. **Goitre Serum.**—Beebe and Rogers report their experiments in manufacturing and the clinical test of their serum for the treatment of goitre. Ten patients were treated, and the results were three apparently perfect cures, three great improvements, and four small improvements. The best results with the smallest dose were obtained from the serum first prepared with the fresh precipitates of nucleoproteids and thyroglobulin, while those obtained from the later dried precipitates being less effective. As the physiology and pathology of the thyroid gland are still obscure, a good deal of clinical experimentation will have to be done. An active serum made from human tissues is capable of doing a great deal of harm and must be applied with great caution. The therapeutical dose is a very small one, and alarming reactions have followed the injection of one c.c. of the serum. No definite statements can as yet be made, concludes Dr. Beebe.

6. **Surgical Treatment of Goitre.**—Hardon advocates the surgical treatment of goitre and reports three cases in which partial thyroidectomy was performed for Graves's disease with good results. His conclusions are as follows: 1. Every irregular tumor of the thyroid, no matter how small, should be removed, since in

this way only can we save the lives of those having malignant growths. 2. Every regular tumor of the thyroid causing symptoms other than mere deformity, should be resected when after a few months' medical treatment the growth is not checked and no improvement is produced. 3. Avoidance of needless traumatism, care of the stump, free drainage, and salt solution to keep the blood and lymph vessels full and to prevent absorption from the wound are points especially mentioned in connection with the operation.

8. **Plexiform Neurofibroma.**—Wynn describes the case of a young man, aged nineteen, which he diagnosed as plexiform neurofibroma; that is, in its clinical aspects, a new growth arising from the connective tissue of a nerve trunk. Studied pathologically, this is not proved, although it is possible that such complete degeneration of the nerve fibres may have occurred. The author thinks that the contentions of Lahmann and others are supported by the following findings in this special case: 1. An absence of nerve fibres and of most cells. 2. The arrangement of the strands parallel to and surrounding the arteries. 3. Extensive proliferation about the smaller vessels. 4. The presence of smooth muscle tissue in the tortuous cords which constitute the chief gross pathological feature of the neoplasm.

9. **Etiology and Preventive Treatment of Scarlatinal Nephritis.**—Lowenberg states that in scarlet fever the function of the skin is almost completely suppressed, thus overtaxing the kidneys, which are also called on to carry off the toxic agent of the disease. There seems to be evidence that this last alone may be sufficient to produce the kidney disorder without the usual clinical manifestations of scarlatina. Constipation, diet, and exposure to cold are all important contributory factors, the last mostly in susceptible and anæmic patients. For prevention, Lowenberg would insist on good ventilation and constant, carefully regulated temperature (68° to 70° F.), a milk diet varied toward the close of the disease, with tender vegetables, fruits, and farinaceous substances cautiously added. Fruit juices are refreshing and help to lessen urinary acidity. Daily urinary examination should be made, especially after each change of diet, and on any appearance of albumin a return to an absolute milk diet should be made at once. Hydrotherapy is mentioned as the one chief remedy. The only drugs of any value in preventing renal complications are alkalies and laxatives. Five or ten grain doses of acetate or potassium citrate are recommended. Minute doses of calomel should be given at intervals of three or four days during the disease, followed by broken doses of magnesium sulphate.

MEDICAL RECORD.

February 17, 1906

1. The Teacher's Part in the Tuberculosis Problem, By S. A. KNOPF.
2. Some Necessary Principles in the Diagnosis of Surgical Conditions of the Upper Urinary Tract, By J. BAYARD CLARK.
3. The Administration of Diphtheria Antitoxine and Performance of Intubation by the Department of Health of New York City, By J. S. BILLINGS, JR.
4. The Nonoperative Treatment of Prostatic Hypertrophy, By WALTER S. REYNOLDS.
5. A Factor in Perineal Lacerations, By WILLIAM H. SHIPPS.

1. **The Teacher's Part in the Tuberculosis Problem.**—Knopf, after reviewing the literature referring to the title of his address and speaking of general rules to be observed in schools, both by teachers and pupils, concludes by saying that he approves of weeding out the tuberculous child and the tuberculous teacher from our public schools. He recommends an examination for tuberculosis of every child and teacher entering the public school and a periodical examination of both

But he states most emphatically that it is our duty to provide for these tuberculous teachers and children. The sanatoria for children should be multiplied and as many teachers as possibly can should be employed there from the unfortunate ones who have contracted tuberculosis. The example set by Andrew Carnegie in pensioning teachers of academic schools should be followed by pensioning educators of our ordinary schools. The author outlines a plan of procedure which he hopes will find the sanction of the public.

3. The Administration of Diphtheria Antitoxine and Performance of Intubation by the Department of Health of New York City.—Billings gives a description of the method of furnishing diphtheria antitoxine to physicians and the rules observed by the department of health in employing physicians as inspectors, together with the working order of the department.

4. The Nonoperative Treatment of Prostatic Hypertrophy.—Reynolds states that the benefit to be derived from operation in properly selected cases of prostatic hypertrophy should be fully appreciated. The symptoms are due, however, in many of these cases to other causes besides the enlarged prostate, which are amenable to treatment and should, therefore, be corrected before operation is decided upon. It is impossible to alter the character of the prostatic enlargement after interstitial changes have taken place in that organ. But much can be done to prevent it if the patient is seen early, when the glandular strictures are principally involved. In some cases massage, hot rectal irrigations, or silver nitrate injections will be of benefit; the use of alcohol should be stopped; suprapubic aspiration can be employed, the careful use of the catheter is to be remembered, irrigations of the bladder with boric acid or formaldehyde are of value.

BRITISH MEDICAL JOURNAL.

February 3, 1906.

1. Acute Bone Disease in Children, By E. OWEN.
2. At What Age Should a Cleft of the Palate be Closed? By R. W. MURRAY.
3. Remarks on the Closure of Gaps in the Skull, with Notes of Cases, By J. H. PRINGLE.
4. Aural Cases in General Practice, By S. PAGET.
5. The Indications for Operation in Chronic Suppurative Disease of the Middle Ear, By W. S. SYME.
6. Remarks on Some Varieties of Hernia in Children (After Radical Cure in 152 Cases), By E. S. CARMICHAEL.
7. The X Ray Treatment of Ringworm, By G. SICHEL.
8. Does Diachylon Affect the Infant When It Fails to Produce Abortion? By R. HEELIS, F. H. JACOB, and S. R. TROTMAN.
9. A Preliminary Note Upon the Cytorrhyses Luis (Siegel) and the Spirochæta Pallida, By A. MACLENNAN.

1. Acute Bone Disease in Children.—Owen discusses acute inflammation of bone as it occurs in children, an acute, dangerous, obscure affection. The new bone at the growing end consists of tissue of great physiological delicacy, and is, therefore, more likely to be the seat of traumatic inflammation and disease generally, than is any other part of the bone. Grave errors in diagnosis are frequent; the disease is often mistaken for acute inflammatory rheumatism, or, when the cardiac valves are affected by the subsequent pyæmia for primary endocarditis. Some of the symptoms superficially resemble those of typhus, typhoid, or even of delirium tremens. The condition is also sometimes mistaken for erysipelas. The presence of deep seated tenderness over the bone is the one characteristic symptom. Owing to the fact that two of the last epiphyses to join on are the knee ends of the femur and tibia, this is a favorite site of septic osteitis. Out of 165 cases the femur and tibia were implicated no less than 130 times, these bones being the most exposed to injury. Although there is a good deal of swelling about the

knee, there is no actual effusion into the joint itself. Delirium is one of the most characteristic features of the disease, and is evidence of very serious septic intoxication. Operation is the only treatment; it is imperative that it be done as early as possible; the bone should be opened before the abscess has formed. In a large proportion of cases of acute osteomyelitis of the lower end of the femoral diaphysis, amputation has sooner or later to be resorted to, because of great increase in the local symptoms and violent constitutional disturbance. It must be recognized that the disease is one of the bone itself and not of the periosteum. It is common for one or more joints to be seriously involved, either directly or by septic infection. As regards the value of antistreptococcic serum, the author is very doubtful. It is a most powerful agent and its injection into a patient causes so much shock that his temperature at once drops, perhaps never to rise again.

2. Closure of the Cleft Palate.—Murray states that while all surgeons are agreed that clefts of the palate should be closed during the first few years of life; but it is not yet decided whether it is better to operate during early infancy or during early childhood. As far as the palate is concerned the chief object of the operation is to render the powers of speech more perfect than they otherwise would be. Theoretically the sooner the cleft is closed the better; practically, however, it is best to wait until the child is between two and three years of age, for the reason that in order to obtain a well formed and freely movable soft palate, excess of cicatricial tissue must be avoided. If the cleft is closed during infancy it can only be done by means of a turn over flap, which of necessity leaves a raw surface to granulate, and will ultimately cause contraction and stiffening of the parts. In a child two years old, however, the edges of the cleft can usually be pared and brought together in the middle line.

3. Closure of Skull Gaps.—Pringle states that in closing gaps and apertures in the skull, the bone removed at the original operation should be preserved and replaced in the opening when possible. In cases where this cannot be done, various methods have been advocated: 1. Implantation of decalcified bone (Senn). 2. Use of calcined bone (Barth). 3. Use of bone sterilized by boiling (Westermann). 4. Implantation of bone removed from another site on the same patient—*e. g.*, the surface of the tibia (Seydel). 5. The implantation of bone from another species of animal. 6. The use of aluminum or other metal plates (Booth). 7. Celluloid plates (Fraenkel). 8. Use of gold leaf, India rubber tissue, or egg membrane to prevent adhesion of the dura or brain to the edges of the opening (Beach, Abbe, Freeman). 9. The osteoplastic method, consisting of making a skin and bone flap (the latter being a thin layer of bone, cut with a chisel) from the skull in the neighborhood of the existing gap, and turning this flap over to cover the defect. The writer has used this method in six cases; three were successful, two failed, and one (with two apertures to be closed) was partially successful. An extensive wound of the dura mater contraindicates the employment of the method. It is unusual for bone fragments to heal in without uniting and becoming firm. Transplantation of bone from elsewhere on the patient or from an animal has no advantages. The use of dead bone is bad; granulation tissue penetrates its pores and disintegrates it.

5. Chronic Otitis Media.—Syme considers the following signs as indicative of operation in cases of chronic suppuration of the middle ear: 1. Pain on pressure over the mastoid, or more particularly the antrum. 2. A sinus behind the ear. 3. Caries of the petrous bone as disclosed by speculum and probe. 4. An extensive or recurring growth of granulation tissue. 5. Facial paralysis. 6. The presence of thick cheesy masses in the tympanic cavity. 7. Very foul

smelling discharge. 8. Stenosis of the meatus, either membranous or bony. 9. Presence of certain baneful microorganisms (the colon bacillus, and the pneumococcus). 10. Persistent discharge in spite of regular and thorough antiseptic treatment.

7. **X Rays in Ringworm.**—Sichel states that in the x rays we have at last found a really reliable treatment, with very fair prospect of cure, and very slight danger of injury, for ringworm. In successful cases a singularly intractable disease, occurring unfortunately at a very important time of life, is once and for all eradicated. But such a result can be obtained only in localized cases of ringworm; if it be generalized or in scattered patches all over the head, more than one treatment is necessary. In successful cases the depilation should occur three weeks after treatment, and the hair should be growing well in three months.

8. **Diachylon and the Fœtus.**—Heelis, Jacob, and Trotman report the case of a woman who had taken diachylon (lead plaster) pills to produce abortion. She failed to produce that effect and went to term; the child lived only twelve hours, suffering from hydrocephalus. Examination of the foetal liver showed the presence of lead.

9. **The Organism of Syphilis.**—MacLennan's observations point to the cytorrhynes luis (Siegel) and the spirochæta pallida being different forms of the same organism, sometimes one being found in syphilitic lesions and sometimes the other.

LANCET

February 3, 1906.

- I. The "Acute Abdomen" (Lecture II),
By W. H. BATTLE.
2. Placenta Prævia: A Series of 94 Cases, By R. WARREN.
3. Some Points in the Treatment of Heart Failure in Diphtheria,
By C. BOLTON.
4. On Eucalyptus Oil as a Vermifuge in Ankylostomiasis,
By L. P. PHILLIPS.
5. Aberrant Vaccinia,
By M. E. PAUL.
6. A Further Contribution to the Study of Mental Fatigue in School Children,
By J. BELLEI.
7. A Case of Glanders,
By L. WOODCOCK.
8. Rupture of the Uterus, with Illustrative Cases.
By T. WILSON.
9. A Case of Dermoid Tumor of the Mediastinum in a Child Aged Two Years,
By G. CARPENTER.
10. On the Uniform Lineal Growth of the Human Fœtus,
By R. C. ROBERTS.
11. A Few Remarks Upon the Reports of the Malta Fever Commission,
By G. M. LEVICK.

1. The "Acute Abdomen."—Battle, in his second lecture upon acute inflammations of the abdominal cavity, considers the perforations of ulcers of the digestive tract that give rise to the "acute abdomen," not including those which take place at the site of a malignant growth, but only those which are known as simple, the sudden giving way of ulcerations of the stomach or bowel into the general peritoneal cavity. Gastric ulcer. Shock may be so marked, and so quickly followed by collapse that nothing can save the patient. In most cases, however, the patient rallies. Vomiting is very common, but may be absent. Fluid is found free in the peritonæum. Rigidity of the recti muscles in the upper part of the abdomen is present with great epigastric tenderness. Duodenal ulcers. These are far more common in males and are difficult to distinguish from gastric ulcers. Simple ulcer of the jejunum. The author reports two cases of jejunal ulcer. The symptoms were similar to those resulting from obstruction by a band. The distention of the bowel was very great. Intestinal perforation in typhoid fever. Here the "acute abdomen" develops during an illness which has already reduced the strength of the patient. Peritonism is not marked and the condition may be overlooked.

2. **Placenta Prævia.**—Warren's conclusions regard-

ing the treatment of placenta prævia are as follows: The only certain means of arresting the hæmorrhage is by pressure on the bleeding points. The progress and completion of the labor is secondary. In cases of ante partum hæmorrhage where the os will not admit a finger, bimanual and abdominal examination should be made to reveal whether the placenta be implanted on the lower segment. These cases can almost certainly be saved if treatment be begun early. Labor should be induced early, since its completion is the ultimate cure. Should the os not admit a bag or the performance of bipolar version, it must be dilated until one of these modes of treatment can be adopted. Having checked the hæmorrhage the next step is to keep up the patient's strength. In severe cases this is best done by autotransfusion; *i. e.*, raising the foot of the bed with chairs; next, in rapidity of action, comes intravenous infusion. Rectal injections cannot be given until labor is complete. As regards the third stage of labor, it is often necessary to remove the placenta manually.

3. **Heart Failure in Diphtheria.**—Bolton discusses the treatment of heart failure in diphtheria. To prevent it, antitoxine should be given at the earliest possible moment, and in large doses; 4,000 to 6,000 units should be the minimum dose, while in severe cases 12,000 to 24,000 units. The point next in importance to antitoxine is *rest* both physical and mental. In the vast majority of the cases after the first three weeks have passed, death from heart failure will occur only as the result of some complication or strain. A slow irregular pulse is of bad prognostic significance. The patient should be kept with the head low, and disturbed as little as possible. Great care should be exercised in spraying the throat. Another danger lies in the strain produced by vomiting. Where heart signs supervene prolonged rest in bed is necessary, possibly for two months or longer. The author has never known digitalis or strychnine to save a case of heart failure following diphtheria. Alcohol lessens the efficiency of the heart. He has had good results from the use of belladonna in small doses.

4. **Eucalyptus Oil in Ankylostomiasis.**—Phillips has found the following mixture give most excellent results as a vermifuge in ankylostomiasis. Eucalyptus oil, 2.50 grammes; chloroform, 3.50 grammes; and castor oil, 40 grammes. The medicine is preceded by a saline purge. The chloroform is an essential ingredient.

5. **Aberrant Vaccinia.**—Paul reports the case of a woman who had a typical large vaccine vesicle just below her lower lip. She had probably been inoculated by the finger nail of her baby who had been vaccinated successfully two weeks before.

6. **Mental Fatigue in Children.**—Bellei has studied mental fatigue in children, as evidenced by the character of their afternoon lessons. He states most positively that the work done by children continuing their lessons on into the afternoon, is, on account of the great mental fatigue that it involves, of no advantage to their instruction but is full of danger to their health.

8. **Rupture of the Uterus.**—Rupture may take place during labor in any part of the parturient canal. The perinæum is most often affected, the uterus least. The rupture may take place suddenly or gradually, and may be complete or incomplete. In the latter case the lesion usually extends from within outwards. Ruptures of the uterus occur more frequently in multiparæ than in primiparæ, the tissues being laxer, and the organ being more often misplaced. In most cases the accident is due to mechanical difficulties in the passage of the child: contracted pelvis, transverse presentation, etc. In a typical case there is sudden intense local pain: the labor pains cease, and there is great anxiety and oppression. Symptoms of collapse

rapidly set in, shown first in the pulse. Blood usually escapes from the vagina in quantities. When the foetus escapes into the abdomen, the shape of the latter changes: the foetal heart can no longer be heard. When signs of threatened rupture become marked immediate delivery must be effected. As a rule it is necessary to perforate and break up the foetal skull. After rupture has occurred, the child must be extracted either through the vagina or by abdominal section. Abdominal or vaginal hysterectomy should then be performed.

LYON MEDICAL.

January 21, 1906.

1. Treatment of Acute Appendicitis by Appendectomy Performed Within the First Twenty-four Hours, By DURAND and THEVENOT.
2. Epicondylalgia (Professional Neuralgia) Among the Workers in "Crin Végétal" (Tillandsia Usneoides) in Algiers, By Dr. MOLLE.
3. Pityriasis Versicolor, Tuberculous Dermatomycosis, By PIERY and RENOUX.

1. **Treatment of Acute Appendicitis by Appendectomy Performed Within the First Twenty-four Hours.**—Durand and Thevenot report two cases and make a strong plea in favor of immediate operation in acute appendicitis as successful in ninety-four per cent. of the cases if done within the first twenty-four hours.

2. **Epicondylalgia Among Workers in "Crin Végétal."**—Molle describes the method of gathering and preparing the *Tillandsia usneoides*, which form a prominent article of export in Algiers, and also a neuralgic affection of the epicondyles which is met with among the workmen.

3. **Pityriasis Versicolor.**—Piery and Renoux state that inoculation of an animal with the scales of pityriasis versicolor is able to induce tuberculosis in animals, while inoculations of scrapings of the skin of phthisical subjects and of the scales of other dermatoses will not produce the same result. Pityriasis versicolor is met with mainly in cases of abortive pulmonary tuberculosis and the authors believe that it should be considered as probably a tuberculous dermatomycosis. They also hold this to be an argument in favor of the existence of saprophytism in the bacillus of Koch and of the mycotic nature of tuberculosis.

PRESSE MEDICALE.

January 20, 1906.

1. Septicæmia in General and Septicæmia Due to Meningococci in Particular, By FOLLET and SACQUEPEE.
2. Some Points in the Urinary Semeiology of Persons Operated On, By E. VIDAL.

1. **Septicæmia Due to Meningococci.**—Follet and Sacquepee distinguish two forms of septicæmia, one without, the other accompanied by visceral lesions, and three clinical conditions, that in which the septicæmia exists first and its localization is chronologically secondary, that in which the local infectious lesion is chronologically first, and that in which the septicæmia and the local lesion coexist while it cannot be determined clinically whether they began simultaneously or not. They then report two typical cases of cerebrospinal meningitis in which Weichselbaum's meningococcus was found in the blood. Analogous observations are rare in literature and these may be divided into two categories, cases of meningitis in which the pathogenic agent was found in the blood during life, and other cases in which the clinical symptoms can be explained only by the supposition that septicæmia was present.

2. **Urinary Semeiology of Persons Operated On.**—Vidal states that after an operation performed under normal conditions there is produced in the organism a great destruction of albumenoid elements and an increase of the normal residues, azote, sulphur and phosphorus. The action of the anæsthetic is held to be

the direct and preponderating cause of the postoperative hyperazoturia.

January 24, 1906.

1. Congenital Projection of the Scapula, By A. BROCA.
2. The Method of Bier, By J. L. FAURE.
3. The Preferable Method of Enterorrhaphy After Enterectomy, By P. DESFOSSES.
4. Abortive Appendicitis and Appendicalgia, By R. ROMME.

1. **Congenital Projection of the Scapula.**—Broca reports a case of this rare malformation which he met with in a girl thirteen years old, otherwise well formed, born at term of well formed parents. Both active and passive movements were performed easily and the malformation caused neither functional impairment nor pain.

3. **The Preferable Method of Enterorrhaphy After Enterectomy.**—Desfosses reduces the numerous methods of anastomosis after resection of a loop of the intestine to two types, union of the two orifices by means of circular sutures, and anastomosis through the sides of the intestine after the two orifices have been closed by sutures. The latter procedure presents the advantages over the former that a sufficiently large communication may thus be obtained, that contact between large serous surfaces and a rapid union may be secured without encroaching on the caliber of the canal, and that the surgeon needs to make no allowances on account of the difference in the diameters of the two portions of the intestine. Nevertheless from the point of view of experimental surgery it seems better to re-establish the continuity of the intestine by the former method because, on the whole, intestinal obstruction is apt to be eventually induced, when the latter method is employed, by the accumulation of material in the artificial cæcum of the upper end of the intestine, the formation of which can hardly be avoided in lateral anastomosis.

SEMAINE MEDICALE.

January 24, 1906.

Orthostatic "Essential" Albuminuria, By CH. AUBERTIN.

Orthostatic "Essential" Albuminuria.—Aubertin believes that this is a symptom common to all parenchymatous lesions of the kidney without hypertension and that it is entirely explicable by mechanical reasons.

ROUSSKY VRATCH.

December 24, 1905.

1. Mental Affections in Connection with Current Political Events, By TH. E. RYBAKOFF.
2. An Epidemic of Plague Along the Chinese Eastern Railroad, By N. N. KLOGNITSKI.

1. **Mental Affections and Political Events.**—Rybakoff, of Moscow, publishes some of his experiences in the Hospital for Mental Diseases in that city during the stirring political events that have taken place recently. He brings up the point that the current of public events has a great deal to do with the prevalence of certain forms of mental affections. This not only applies to the form of hallucinations and delusions exhibited by patients who in the course of mental disease suffer from these symptoms, but also shows a more close organic connection between the events of the day and certain cases of mental disease, the latter being directly due to the exciting occurrences. The author notes the significant fact, that in his twelve years' experience in the clinic he has never seen so many cases of paranoia within such a short period of time, and concludes that the disorders in Russia have had a great deal to do with the development of these cases.

2. **Observations on the Plague in the Far East.**—Klognitski was detailed by the military medical authorities to study an epidemic of plague in a small settlement situated along the Chinese Eastern Railway. This hamlet had a population of 152 souls, living in

twenty-seven huts. The number of cases of plague was fifteen, and the infection was traced to one particular hut where the first case occurred. The mortality was 86.6 per cent.; that is, only two of the fifteen recovered. Attempts to trace the epidemic to the rodents which abound in that part of Manchuria were not entirely successful, although suspicion did point to these animals as sources of contagion. One arctic mouse was found dead along the road about ten miles from the station, but smears prepared from its body did not show any plague bacilli. The entire steppe was found strewn with openings indicating the abodes of these rodents which are a little smaller than rats and which stand on their hind legs and flee at the sight of man. The difficulty in obtaining rodents for investigation lay in the fact that cold weather had set in when the expedition arrived, and the animals had already begun to hibernate.

ANNALS OF GYNÆCOLOGY AND PÆDIATRY

January, 1906.

1. Tubal Abortion, By H. C. COE.
2. Hydatid Disease of the Ovary, with the Report of a Case, By W. T. GIBB.

1. **Tubal Abortion.**—Coe has found tubal abortion, or the escape of the product of conception through the dilated distal end of the gravid tube, a condition so common that it is frequently unsuspected if the accompanying hæmorrhage is not profuse. He believes that the mortality from true intraperitoneal rupture is not more than twenty per cent. The necessity for surgical interference lies in the fact that one can never foretell the result if a case is left to nature. Tubal abortion usually occurs before the sixth week of impregnation, pregnancy being usually arrested thereby. He agrees with Küstner that about four fifths of the tubal pregnancies end in abortion. Abortion if not treated surgically may be followed by absorption or a hydrosalpinx. Subsequent removal is frequently required. The treatment of tubal abortion is either expectant or surgical, and the latter may be palliative, conservative, or radical. The important suggestion is made that the rapid introduction of a large quantity of saline solution into the veins may be followed by serious or fatal pulmonary œdema.

2. **Hydatid Disease of the Ovary.**—Gibb states that his case is the second to be reported in this country. This disease is increasing in frequency among the domestic animals, hence its great importance. Its origin by introduction of the ova of *tænia echinococcus* into the human alimentary canal was referred to the adult *tænia* being found in the small intestines of the dog or wolf. Many of the organs and tissues of the body are subject to the invasion of this but the organ most frequently attacked is the liver. The ova are usually ingested by the medium of drinking water, and those who live in close relations with dogs, especially those who are careless, ignorant and filthy are most liable to be subjects of this disease. The treatment of ovarian hydatids consists in their removal. They are usually secondary to the disease in other organs, and when a tumor is removed the abdominal cavity should be carefully examined for other similar tumors.

ANNALS OF SURGERY.

January, 1906.

1. On Preservation of the Nerve Supply to the Brow in the Operative Approach to the Gasserian Ganglion, By H. CUSHING.
2. The Operative Treatment of Cleft Palate, with a Report of Eight Cases, By C. H. PECK.
3. Acute Œdema of the Lungs Secondary to Ether Narcosis, By V. C. PEDERSEN.
4. Excision of Portions of the Chest Wall for Malignant Tumors, By E. RIXFORD.
5. Nonparasitic Cysts of the Spleen, By C. A. POWERS.
6. Perforation of the Gallbladder, with a Report of Ten Cases, By A. MACLAREN.

7. The Value and Place of Duodenocholedochotomy in Gallstone Surgery, By J. C. HANCOCK.
8. Construction of the Duodenum Below the Entrance of the Common Duct and Its Relation to Disease, By A. J. OCHSNER.
9. An Anomaly of the Duodenum Resulting in Death After Gastroenterostomy, By J. G. MUMFORD.
10. Resection of Intestine Followed by End to End Anastomosis. Report of Cases, By E. ELIOT, JR.
11. A Transverse Incision for the Removal of the Appendix, By G. G. DAVIS.
12. The Radical Cure of Direct Inguinal Hernia, By G. G. DAVIS.
13. The Radical Cure of Severe Femoral and Inguinal Hernia, By J. H. NICOLL.
14. The Radical Operation for Inguinal Hernia, By J. R. EASTMAN.

2. **The Operative Treatment of Cleft Palate.**—Peck's conclusions are as follows: 1. The operation advocated is essentially that of Langenbeck, and closes the cleft in nearly all cases. 2. The easiest operations are between the sixth and the tenth years; the best time to operate is between the second and third years, if the danger is not too great. 3. The Rose position and the Whitehead facilitate exposure and control of hæmorrhage. 4. The bellies of the levator and tensor palati must be preserved, also their insertions into the palatine aponeurosis, but the attachment of the latter to the posterior margin of the hard palate must be divided, also the mucous membrane on the nasal aspect of the velum. 5. The salpingopalatine fold of mucous membrane must be divided to secure complete relief of tension. 6. Suturing should be performed with exact approximation and without injury to the edges by needles. 7. After treatment should be simple, feeding by mouth may be begun in twenty-four hours. The protective plate is very useful for older children and adults.

3. **Acute Œdema of the Lungs Secondary to Ether Narcosis.**—Pedersen draws the following important conclusions from the narration of sixteen cases: 1. The quantity of ether varied between one and six ounces. Haste in administration is more objectionable than quantity. 2. The bag or regulable inhaler was used, this being the safest and best. 3. Manner of administration and other circumstances in the management of narcosis and convalescence are the ætiological factors. 4. The nature of the operation is not of so much moment as the conditions of temperature and ventilation. 5. The limits of life in the sixteen cases after operation were one and a third hours and thirty-three hours. 6. Age and sex are unimportant as data. 7. Previous good health was noted in three cases. 8. Some of the lesions found at autopsy involved heart, kidneys, lungs, abdominal viscera and brain. 9. Œdema of the lungs was found during life in eleven cases, and after death in five. 10. Treatment consisted of venesection, dry cupping, cardiac and respiratory stimulation, artificial respiration and elevation of the foot of the bed.

6. **Perforation of the Gallbladder.**—MacLaren in the course of eighty operations upon gallstone cases has had ten which were perforative. Eight recovered, one died, and the tenth was an autopsy case. The result in the fatal case would have been the same had the gallbladder been removed, as it was gangrenous, there was a localized abscess, and infection would have extended. In similar cases he would advise opening and draining the abscess and dealing with the gallbladder disease subsequently. In perforative cases in which the infection is not localized he advises cholecystectomy with drainage of the kidney pouch and pelvic cavity and the Fowler position. The author thinks his experience proves the desirability of removing gallstones before complications arise.

7. **The Value and Place of Duodenocholedochotomy in Gallstone Surgery.**—Hancock sums up his arguments

as follows: 1. In favor of this operation for gallstones in the lower end of the common duct are avoidance of drainage, greater ease in sewing the duodenum than the duct incision, kindly healing of intestinal wounds, easy access to common duct, ease of dilatation of papillary orifice for drainage. The duct may be incised for half an inch to extract stone or favor drainage. Against the operation are the prejudice against opening the gut, the fear of fistula, and the dread of infection. 2. In neoplasm of the papilla this route is indicated for diagnosis and treatment if the growth is amenable to local treatment and the gallbladder cannot be used for anastomosis or drainage. 3. In total stenosis of the papillary orifice choledochoduodenostomy could use the incision of duodenocholedochotomy, the anastomosis being at a low point in the common duct.

10. Resection of Intestine Followed by End to End Anastomosis.—Eliot calls attention to the fact that there is danger of leakage in end to end anastomosis if the resected ends of the intestine are unduly congested or friable. Many deaths doubtless occur from this cause, and the author's method, it is believed, will sometimes avert difficulty. If the abdomen is to be tightly closed, without the safeguard of drainage, or of anchorage of the affected loop to the parietal peritoneum, side to side anastomosis with closure of the resected ends by purse string suture will give the best results. If the condition of the resected ends is normal, end to end anastomosis without drainage (except in the case of the sigmoid) may be adopted without fear of subsequent peritonitis.

THE PRACTITIONER

January, 1906.

1. Convulsions in Typhoid Fever, By W. OSLER.
2. The Treatment of Uric Acid, By J. F. GOODHART.
3. (A) On Solubility as Applied to Urine. (B) On the Treatment of Gout. A Protest, By W. G. SMITH.
4. Physiological Action of Tea as a Beverage, By Sir LAUDER BRUNTON.
5. The Present Position of Dietetics, By R. HUTCHISON.
6. A Review of Some Recent Work on the Surgery of the Stomach and Appendix, By H. M. RIGBY.
7. On the Use and Misuse of Tuberculin, By A. B. HARRIS.
8. Tropical Diseases. A Review of Recent Work, By R. T. HEWLETT.
9. Oedema of the Face, By A. R. SHORT.
10. The Treatment of Locomotor Ataxia, By C. S. BOND.

1. Convulsions in Typhoid Fever.—Osler affirms that this is a rare complication. It has occurred only eight times in fifteen hundred cases of fever at Johns Hopkins Hospital. The histories of these cases show that the convulsions may occur (1) at the onset and apparently as the starting point of the disease, (2) as a manifestation of the toxæmia, leaving no ill effects, (3) as the result of severe cerebral complications such as thrombosis of the vessels, meningitis, or acute encephalitis, (4) from unknown causes during convalescence. The prognosis is not grave, considering the alarming nature of the complication. Of the eight cases one died from perforation, one from tuberculous meningitis, and only one from the cerebral condition causing the convulsion.

2. The Treatment of Uric Acid.—Goodhart observes that in some cases no matter what form of diet is used uric acid in excess will be found and will appear in the urine. While no accurate rule is possible the author's observation would lead him to exclude carbohydrates from the diet rather than proteids if either is to be excluded. Of those who excrete too much uric acid it seems to make no difference in the feelings in one group, while in another they are always miserable and always conscious that some organ is at fault. The author has been unable to find that red meat will cause excess of uric acid unless combined with rich gravies

and condiments. He is certain that a diet of bread and starchy materials leads to excess of uric acid in a large number of cases. Objectionable substances, certainly when used in excess, are salt, acid, fruits, vinegar, and fermented or distilled liquors. Little is said by the author as to treatment except that it is well to find that diet which best agrees with one, to take a course of treatment at a suitable mineral spring, drinking saline water in abundance.

3. On Solubility as Applied to Urine. On the Theory of Gout.—Smith states the three essential points as to the solubility of urine are: 1. The behavior of the deposit to hot and cold water. 2. The action of dilute acids upon the deposit. 3. The action of caustic alkalies upon the deposit or calculus. As to gout he pleads for a wider and more catholic conception than is popularly accepted. He thinks we should cease to look upon a single factor and confess that we are ignorant of the true pathology of the disease. He believes that those who suffer with gout should take freely of milk, cream, and cheese, which are almost free from purin bodies, and sparingly of those which contain purin bodies in excess.

4. Physiological Action of Tea as a Beverage.—Brunton states that when tea is properly prepared and taken in moderation, it is both useful and agreeable. If taken in too large quantity or with soft meat, if taken too strong, if infused too long, or if boiled and stewed it will produce digestive troubles. If taken in excess it may produce nervous symptoms of the most serious character, and facilitate if it does not actually produce mental degeneration.

5. The Present Position of Dietetics.—Hutchison calls attention to the two functions of food to conserve energy within the body, and to conserve matter. The income of potential energy in the form of food must balance the expenditure of energy in the form of heat and work and help replace the daily wear and tear of body substance. The question as to how much food is necessary for the maintenance of health may otherwise be stated as (1) how much total energy, and (2) how much proteid should the diet contain. In answer to the first it may be said that the consumption of food which contains less energy than is required to maintain the temperature of the body at its normal limit exposes the individual to grave risk of sudden disaster. In answer to the second it may be said that temperance in proteid should be the ideal, and if this is observed it probably matters little from what source the proteid is derived.

7. Use and Misuse of Tuberculin.—Harris advocates the opsonic method of Wright as a test before attempting curative measures with tuberculin. Wright simply uses cultures of the dead bodies of the infecting organism as a means of immunising without resorting to chemical filtrates, extracts, residues, or precipitates. The new tuberculin of Koch sent out from Germany in small phials should be diluted with one thousand parts of water. As it is the dried filtrate from cultures of tubercle bacillus, and has only been subjected to a process of fine grinding, it is possible that the vitality of the organisms may not have been destroyed. The dilution should therefore be sterilized by heating to 60° C. for twenty minutes.

REVUE DE MEDECINE.

January, 1906.

1. Experimental Investigations as to the Influence of Sugar Upon Work, By C. FÉRÉ.
2. The Morbid Predisposing Causes in Mental Pathology, By E. MARANDON DE MONTYEL.
3. Puerperal Eclampsia, By P. J. BRUINE PLOSS VAN AMSTEL.
4. Education of the Respiratory Function. The Rôle of Air as a Curative Agent, By M. FAURE and C. REYMOND.

5. A Case of Myocardial Tuberculosis, By G. TOLOT.
6. Four Attacks of Pneumonia in the Same Individual in the Course of a Year, By R. LEPIÈRE and FROMENT.

1. Experimental Investigations as to the Influence of Sugar Upon Work.—Féré thinks he has demonstrated by previous investigations the utility of alcohol as a means of sensorial excitation. His present studies have shown that those substances whose combustion is most complete and those which best excite combustion lead to exhaustion. Whatever causes excitement produces fatigue, excitability during fatigue increases for a certain period, the requisite degree of repose being necessary to counterbalance. Exhaustion is a consequence of all forms of excitement, whether in the emotions or the sensations. It is especially the result of excitement of a pathological character. This is well demonstrated in the post paroxysmal condition of epileptics. The consequences of toxic or alimentary excitement do not differ materially from that pathological excitement resulting from voluntary activity. The use of sweets at the end of a meal causes stimulation which seems to favor digestion and apparently anticipates the fatigue which might be caused by digestion.

2. The Morbid Predisposing Causes in Mental Pathology.—Marandon de Montyel, after an experience of thirty years among people of unsound mind, dissents from the prevailing views as to the cause of mental alienation. He concludes that there are six causes which he divides into three groups, the infectious group, with typhoid fever and chronic malarial poisoning, the toxic group with chronic alcoholism and chronic melancholy, and the physical group with cranial traumatism including cerebral concussion and insolation. In all such cases there must be, however, an antecedent physical defect. The author is therefore convinced that in mental pathology there must always be a predisposition. He seeks to establish two facts (1) that the conditions above mentioned create a predisposition which will sooner or later result in insanity, (2) that they will not cause insanity in an individual previously in sound mental condition until that predisposition has first been established.

3. Puerperal Eclampsia.—Van Amstel discusses the various theories concerning this disease which have arisen from time to time, all of which are true and substantial as viewed from the standpoint of each individual author. Disease of the kidneys undoubtedly exists in many of the cases of eclampsia, due to pre-existing renal lesions, to pressure upon the ureters and arteries, with consequent changes in the urine secreted. But cases are reported in which no albumin was found at any time in the urine, nor was any renal disease revealed by autopsy. The lesions of the liver are also important as ætiological conditions and may be either acute or chronic, but they also are entirely absent in some of the eclamptic cases. Lesions of the heart, especially degeneration of the myocardium, are also found in many of the cases and Schmorl says such complications are never absent. With any of the organs mentioned the diseased conditions result in the production of secretions which are harmful. The brain, the pancreas, and the spleen may likewise present evidences of disease. It would seem more rational to consider eclampsia as a disease which affects the entire organism, than as a disease of one organ essentially.

REVUE DE CHIRURGIE.

January, 1906.

1. Conservative Operations for the Relief of Uterus Didelphys with Independent Corpora, By E. QUÉNU and E. LE SOURD.
2. Cholerrhagia in Connection with Hydatid Cysts of the Liver, By F. TERRIER and C. DUJARIER.

3. Peptic Ulcer of the Jejunum Following Gastroenterostomy, By A. GOSSET.
4. Osteoperiosteal Lipomata, By L. SCHWARTZ and CHÉVIER.
5. Abscess of the Liver Followed by Cholerrhagia, By A. VALENCE.
6. Intermittent Dropsy of the Gallbladder Due to Obliteration of the Cystic Duct, By E. VILLARD and G. COTTE.

1. Conservative Operations for the Relief of Uterus Didelphys with Independent Corpora.—Quénu and Le Sourd consider two varieties of this condition, (1) that in which both body and cervix are distinct in each segment, and (2) that in which one cervix is joined to two bodies. The cases are divided clinically into those in which hæmatometra is a complication, and those in which there is no such complication. In the first class of cases it is recommended that the operation be a supracervical hemihysterectomy. The segment which is to be retained will depend not only upon its own condition but upon that of its contiguous annexa. One ovary should be preserved if possible. In the second class of cases total hysterectomy is recommended. Pregnancy in either segment of a double uterus, simultaneously, is possible, but in the few recorded cases abortion has been the rule. Pregnancy in a single segment has frequently extended to term, living children having been born in some of the cases.

2. Cholerrhagia in Connection with Hydatid Cysts of the Liver.—Terrier and Dujarier state that this condition is not infrequent as a complication. It has two forms: (1) partial, which tends to spontaneous cure; (2) total, which is attended by discoloration of fæces and by grave symptoms which may terminate fatally. Two causes are referred to: (1) The opening of the biliary canals either intrahepatic or extrahepatic; (2) complete or partial obliteration of the principal biliary channels, either temporary or permanent. The treatment should be prophylactic and curative. The fistula may be tamponed, or it may be injected with tincture of iodine. Many cases have thus been cured, the bile eventually taking its normal channels. Should the conditions continue unfavorable, the biliary tracts should be explored and drainage established by way of the hepatic duct of the gallbladder.

3. Peptic Ulcer of the Jejunum Following Gastroenterostomy.—Gosset observes that in half the recorded cases this condition has followed gastroenterostomy at periods ranging from ten days to nine years. It is identical with ulcer of the stomach and duodenum. It has two clinical forms: (1) the one which occurs suddenly, with violent pain and vomiting, perforation appearing with no precedent symptoms; (2) that in which there are suggestions of gastric ulcer, with infiltration of the abdominal wall, in which there is localized peritonitis with exudation. The first form is usually quickly fatal, the second is often relieved by operation; in some cases recovery has occurred spontaneously. Recurrences are frequent. As a means of prevention the author advises that in performing gastroenterostomy the anastomosis be made as far as possible from the pyloric region.

5. Abscess of the Liver Followed by Cholerrhagia.—This condition signifies, according to Valence, the discharge of bile, pure or mixed with pus, within twenty-four hours after incision of an abscess of the liver. It is a serious complication, resulting in great loss of nutritive material, and is accompanied with emaciation. Suggestions as to its treatment are the use of the thermocautery iodoform gauze tampon gelatin in from 1 to 10 per cent. solution. The patient should be nourished efficiently, the skin around the fistulous opening should be kept moist with vaseline, and irrigation of the abscess cavity should be practised sparingly, if at all.

Letters to the Editors.

THE EARLY TREATMENT OF SUSPECTED SYPHILIS.

39 WEST THIRTY-FIFTH STREET,
NEW YORK, February 12, 1906.

To the Editors: Recently at a meeting of the Clinical Society of the New York Polyclinic a paper was read by Dr. A. R. Robinson on The Rational Treatment of Syphilis. The paper was long and interesting, and the time for discussion was so very short that many who might have wished to express their opinion on the subject did not feel like taking up the time of the members of the society by so doing.

The writer was much impressed by the positive statement of Dr. Robinson that he would in all cases begin treatment as soon as a positive diagnosis was made, i. e., before there were any skin, mucous, or mucocutaneous manifestations. Now, there arises a very serious question in this regard, for there are a large number of experienced syphilologists who contend that there is no such thing as a positive diagnosis of the disease without the presence of the three faithful allies, the chancre, the glandular enlargement, and the eruption. The writer wishes to state most forcibly that there are too many genital sores which have induration, and which are accompanied by glandular enlargement, to allow or make safe a positive diagnosis, even by the very highest authority, without the presence of the last of the three diagnostic points, i. e., the eruption.

The danger of Dr. Robinson's paper does not lie so much in the fact that he read it before a clinical society as in the fact that he read it as a teaching authority in a postgraduate school largely attended by general practitioners. It is well known to the profession that in mercury we have a specific for the treatment of the disease in question, and that the administration of this drug will check or altogether hold in abeyance specific manifestations. It naturally follows, when mercurial treatment is begun before the occurrence of a definite skin, mucous, or mucocutaneous manifestation, that there will always be a considerable question as to whether the case is really one of lues.

But there are indeed many good and very sound scientific reasons for not instituting treatment before a diagnosis has been made beyond all peradventure. In the presence of the disease mercury, when properly administered, acts as a distinct specific, counteracting the toxæmia and generally improving the systemic conditions, as is evidenced by the improvement in all the functions of the organism; the eruption disappears, the glandular enlargements fade away, the red blood corpuscles increase, and there is a steady general improvement, with a tendency to return to the normal. When mercury is administered to a person not suffering from specific disease, every organ in the body suffers; profound anæmia and cachexia due to chronic mercurial poisoning are the inevitable results. So true are these statements that one may almost say, in a supposed case of syphilis, where there are anæmia and cachexia under one properly administered mercurial treatment, there has been a mistake in diagnosis. The writer has taken this view on several occasions where patients have come to him for an opinion as to their condition, and has stopped the mercurial treatment and given potassium iodide (antidote for mercury) for a week, followed by iron and tonics, with a resulting disappearance of the symptoms and a return to health. These patients were being slowly poisoned by an attempt to treat a disease from which they were not suffering. It is well known that to await the eruption in a case of syphilis in no way renders the disease more dangerous to the patient or less amenable

to treatment. Why in the name of common sense should we not wait and thereby clinch the diagnosis, and leave absolutely no doubt as to the existence of the disease?

GEORGE FRANKLIN SHIELS.

THE PHYSICIAN AND THE PHARMACOPŒIA.

12 MOUNT MORRIS PARK WEST,
NEW YORK, February 10, 1906.

To the Editors: You may perhaps be aware of the fact that the undersigned had something to do with the present warfare against nostrums. But wholesale, indiscriminate denunciation I condemned from the very beginning, and especially have I no sympathy with those who, out of *sheer ignorance*, try to make a bible, a fetish out of our *Pharmacopœia* and want to make it an unpardonable sin to prescribe or use anything extrapharmacopœial. How absurd this tendency is will be seen from a little illustration in a day's practice of my own. I trust it will be admitted that the writer knows as much about drugs as the average physician, and knows fairly well what is best for his patient. Well, on looking over to-day's work, I find that I washed out a man's bladder with oxycyanide of mercury; I administered two injections of salicylate of mercury; I prescribed pills of tannate of mercury; I used and prescribed injections of protargol and argyrol; I used eucaine as a local anæsthetic; and I used several times a proprietary lubricant for the urethral sounds. Here I have used seven different substances, *not one of which is official* in the *Pharmacopœia*. Of the seven products, the first three are nonproprietary, and the four others proprietary. Would anybody have the hardihood to tell me that I should not have used these drugs, or that my patients could have got along with other drugs official in the *Pharmacopœia* and *just as good*? No, in the name of common sense, let us not become hysterical. The *Pharmacopœia* is a good book, it is a book of standards, but in the very nature of things it cannot be a perfect book. It is generally ten years behind the times, and when it does appear, it is hedged about with so many restrictions about the admissibility of some of the most valuable of our preparations that the *Pharmacopœia* can only be an authority as to the preparations which are in it, but it can be no guide as to the usefulness or worthlessness of the preparations which are not found in its pages.

WILLIAM J. ROBINSON.

Proceedings of Societies.

NEW YORK OBSTETRICAL SOCIETY.

Meeting of December 12, 1905.

The President, Dr. LE ROY BROWN, in the chair.

The Gonococcus in the Puerperium.—Under this title Dr. W. S. STONE and Dr. ELLICE McDONALD presented the paper of the evening. A brief review of the recent literature was followed by a detailed report of seventeen cases in which the gonococcus was found, either alone, or in conjunction with the streptococcus and colon bacillus. In nine out of fourteen cases, in which the gonococcus was the only organism found, fever was present, lasting on an average of four days, of irregular character, corresponding in the majority of cases to the sapræmic type. All the cases were in primiparæ. Pain, located in one or both sides of the pelvic region, was present in nine, and rigidity was more or less marked in seven cases. Premature interruption of pregnancy had occurred in three of the cases without discoverable cause. The lochia were distinctly purulent after the fifth day, and smears taken from the cervix after the discharge had become altered in character were much more apt to show gonococci than during the first few days.

The conclusions of the paper were: Gonococcus in-

fection is present in a much larger proportion of patients of the obstetrical clinic than had previously been supposed by the writers. The positive diagnosis of the gonococcus is difficult in the absence of pus cells, and these do not, as a rule, appear until late in the puerperium. The spread of the gonorrhœal infection also increases the ease of recognition of the organism as the puerperium advances. The temperature curve of patients having fever are so varied that no reliance can be placed upon this as an aid to diagnosis. The most common type seems to be that of a sudden rise followed by a return to normal in three or four days, simulating sapræmia. The puerperal state has a direct influence upon the course of the disease. Gonorrhœa which has been latent before labor commonly spreads upward with rapidity during the puerperium. Gonorrhœal infection is a frequent cause of abortion, and in all cases of late abortion this should be considered. Thus, if annexial disease follows an abortion, it should not be ascribed to the abortion, as gonorrhœal infection may have been the cause of both.

No positive conclusions are arrived at as to the relation of this infection to nutritional or other disturbances in the infants, except for the well known frequency of ophthalmia. The morbidity and the mortality of the infants, however, were relatively so great in this series of cases that it seems probable there is a relation between the disease of the mother and nutritional disturbances of the child.

Dr. J. CLIFTON EDGAR said he did not consider the gonococcus infection so serious a matter in the puerperium as he formerly had. He thought the puerperium favored the lighting up of a chronic infection, but believed the cases with a stormy puerperium were the result of a mixed infection. He agreed with the writers of the paper as to the frequency of sterility as a result of this infection. He disagreed, however, with Kimball and Holt in their opinion that a gonorrhœal infection, conveyed from one child to another in an institution, might be the cause of general peritonitis.

Dr. CHARLES JEWETT stated that no contribution on this subject was of value unless it was based upon a definite bacteriological diagnosis, as even in women with gonorrhœa childbed fever might be due to other causes. He would not say that gonorrhœa in the puerperium was not a serious matter, but that it was not a serious factor in puerperal infection. As proof of this he alluded to the fact that, despite the frequency of gonorrhœa in childbed, trained obstetricians had almost no death rate from infection. The bad results were mainly abortion, pyosalpinx, and sterility. Abortion was more often the result of chronic gonorrhœa than was generally supposed. He estimated that gonorrhœa was a cause of sterility, either primary or secondary, in about fifty per cent. of the cases. His own experience with gonorrhœa in the puerperium as a cause of fever agreed with that of other observers. There was usually a sharp rise, beginning a few days after labor, but in uncomplicated cases it was not high and usually soon subsided. Of thirty-one consecutive puerperal cases of his own, the temperature went above 100.5° F. in five, in four of which clinical evidence of gonorrhœa was present. In one only did it go above 103°. In sixteen cases with gonorrhœal secretions, five patients had a temperature above 100.5°. He could recall only one fatal case of probable gonorrhœa in the puerperium, which was undoubtedly a mixed infection. Fever began in a day or two after labor and continued for four weeks.

Dr. E. H. GRANDIN regarded gonorrhœa more as an agent in the prevention of impregnation than as one which led to complications in the puerperal state. Although no bacteriological diagnosis had been made in his own cases, he was inclined to think most of these disturbances were due to a mixed infection, and that

the gonococcus played an unimportant rôle in the puerperium.

Dr. JAMES D. VOORHEES had seen so many patients that presented the clinical picture of gonorrhœa go through labor and the puerperium without any rise of temperature that he did not fear these cases so much as formerly. Of 104 cases of ophthalmia in the Sloane Maternity Hospital, only twenty-two of the mothers had fever, of whom only eight had fever earlier than the fifth day, and only two had a temperature over 104°, which lasted only a short time. No fever was present in five cases of vulvovaginal abscess. The cases of high temperature before the fifth day, he thought, were due to a mixed infection.

Dr. SIMON MARX thought that the gravity of the subject was overestimated, but that any woman with gonorrhœa was more apt to have sepsis than women with normal vaginal secretions. He believed that a vagina infected with gonorrhœa should be cleansed prior to labor as thoroughly as for a major operation. He also spoke of the dangers of curetting in these cases, and mentioned a case in which gonorrhœal rheumatism had followed such a procedure.

Dr. R. A. MURRAY stated that it was his opinion that gonorrhœa caused a reduction in the resistance of the tissues to other infections, although his experience was not based upon bacteriological examinations. He did not look upon gonorrhœa as a frequent or dangerous complication of the puerperium, except when too much douching or curetting had been carried out. He recalled three serious cases of this infection—one with peritonitis and two with valvular disease of the heart.

Dr. RALPH WALDO asked if the Credé treatment had been carried out in all the cases reported. He had noted that at the City Hospital patients with severe venereal disease almost invariably did well in the puerperium.

Dr. J. RIDDLE GOFFE asked if laboratory experiments showed that the presence of the gonococcus facilitated the development of other microorganisms.

Dr. ARTHUR M. JACOBUS asked if any gas producing microorganisms had been found in this series of cases. He had recently seen several cases that presented the clinical evidences of gonorrhœa, in which the laboratory report gave no gonococci as being present, but some gas producing organisms and diplococci resembling the gonococcus. He considered the mixed infection to be the cause of the virulent forms of puerperal infection. He would rely, however, more upon the laboratory diagnosis than the clinical histories and appearances.

Dr. R. H. WYLIE said he had modified his views as to the constant presence of the gonococcus in cases with clinical symptoms of gonorrhœa, as he had seen several in which this microorganism was absent.

Dr. ELLICE McDONALD said that the gonococcus was isolated with difficulty in the early days of the puerperium, because of the amount of blood in the discharge. In this study few had been found before the fifth day. Williams had found the gonococcus eight times in 150 cases, and Little very recently sixteen times in fifty cases. He did not think the presence of the gonococcus favored the growth of other bacteria. Although this infection might not be severe during the puerperium, he did not think it could be assumed that it was not a serious disease, as in contradistinction to the streptococcus the after results were often serious. He thought the severity of the infection depended upon the extent of the anatomical lesion. He had seen one case of fatal peritonitis in the puerperium, in which a pure culture of gonococcus was found.

Dr. W. S. STONE said the writers had not attempted to show that gonorrhœa was frequently a fatal puerperal disease. In the first case the patient undoubtedly died from a streptococcus infection, but the lesions of both infections were demonstrated and confirmed

by the bacteriological report. He thought pyosalpinx, although often ascribed to the ordinary puerperal infection, was almost invariably due to the gonococcus. The mild cases of gonorrhœal infection so often simulated sapræmia that he thought extra care should be used in regard to curetting, because if gonorrhœa was present, it might be the cause of subsequent complications. He stated that the Credé treatment was carried out as a routine in the hospital.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of December 13, 1905.

The President, Dr. JAMES M. ANDERS, in the chair.

Arteriosclerosis as a General Disease.—In this paper Dr. ALFRED STENGEL called attention to the fact that there was at the present time a much wider conception of the rôle of arteriosclerosis as an independent pathological condition and as the underlying cause of various organic diseases than formerly. Before the contributions of Gull and Sutton hardening of the vessels was considered merely in the light of a mechanical condition obstructing circulation to some extent and establishing conditions out of which a thrombotic obstruction of the circulation or hæmorrhage might arise. The modern study of arteriosclerosis would divide it into three stages: 1. A primary stage, difficult of recognition in its beginning and confusing to the clinician in his efforts to distinguish the part of the ætiological factors from that of the arterial disease in the symptom complex. 2. A middle period, during which the arterial disease was easy to recognize, but in which secondary organic changes had a rôle of variable importance. 3. A final stage of failure of circulation, organic failure, and terminal infections. In the first stage the direct evidence of sclerosis of the vessels was inconspicuous, while certain general symptoms might be present and be interpreted as the result of the causes that operated to produce sclerosis of the vessels or in some part the result of already beginning sclerosis. The difficulty of diagnosis lay in determining the respective parts in the symptom complex.

The speaker, in discussing the question of excessive tension as a necessary condition in the early part of arteriosclerosis, insisted that his experience led him to believe that the very earliest change was one of loss of elasticity in the vessels and reduced pressure, and that when continued high pressure was met with this was significant of already established sclerosis. He was inclined therefore to question the existence of such a stage of presclerotic arteriosclerosis as had been described by certain writers, notably in England.

Among the symptoms of early arteriosclerosis, he spoke of the loss of vitality, decreased resistance to external conditions, and a tendency to slight infectious ailments, nervous depression, various organic derangements, and moderate circulatory disturbances. Taken as a whole, the symptoms in such cases might justify a separation of groups which could be appropriately designated the nutritional, neurasthenic, and nervous groups. In the first the general loss of strength, vitality, etc., was the conspicuous feature; in the second the vital depression and lowered nerve tone with beginning circulatory disturbance; in the last, attacks of migraine, profound muscular weakness after effort, evidence of disturbance of the cerebral circulation, tendency to neuralgia, and the like.

In the second period of the disease, when the thickening of the vessels was quite evident upon physical examination, there were also likely to be met with symptoms of organic disturbance, such as albuminuria and other conditions of renal disease, palpitation, irregularity of action and other signs of myocardial disease, and a variety of cerebral affections. Less frequently pancreatic or hepatic diseases might originate

from arteriosclerosis. It was important in this period of the disease that the physician should realize the widespread character of the underlying pathological condition, and not fix his attention too closely upon the organ conspicuously affected.

In the last stage, when the vitality and particularly the circulation failed, terminal diseases and many other terminal infections, especially pulmonary and puerperal, were likely to occur. There was rarely any difficulty in recognizing the existence of the arterial disease and the part which it had played in bringing about the reduced state of vitality which acted as the predisposition to the terminal conditions.

He suggested that there was a similarity in kind as well as in time of occurrence between presenile arteriosclerosis, the form which occurred in younger subjects, and the normal involutional senile type. Clinically, these cases distinguished themselves by their more rapid course and by the greater degree of embarrassment of the organs of the body; and, pathologically, in the speaker's experience, by a tendency to restriction to limited areas of the circulation. The more uniform and widespread the process, the more nearly was the senile type with its gradually developing hardening approached. When single vessels were seriously involved, rapid obstruction of organic function was more likely to occur, and the condition was more distinctly pathological.

The Relations Between Cardiac and Renal Disease and Arteriosclerosis.—Dr. WILLIAM H. WELCH, of Baltimore, said in this paper that there never could be an adequate understanding of arteriosclerosis unless the subject was approached from the anatomical, pathological, and clinical standpoints. It was a disease attended with extraordinary perplexities and variability of symptoms and sometimes characterized by entire absence of symptoms. That chronic Bright's disease might be the result of arteriosclerosis, there was no doubt, the main question being whether or not there were any peculiar anatomical or clinical characteristics of that variety of Bright's disease distinguishing it from the other types. The most common type of arteriosclerotic tissue was of very little clinical importance in the discussion. It was the form found frequently in old people, and though it gave the impression of rather advanced chronic Bright's disease, microscopical examination gave very little evidence of disease, merely an atrophy of the kidney giving rise to no symptoms. The discussion hinged, however, about the group of symptoms of so called genuinely contracted kidney, a variety of chronic diffuse nephritis with excessive degenerative changes in the epithelium, fibroid changes in the glomeruli, and excessive changes in the arterioles. The main question was whether or not the change was primary or secondary, and much importance attached to the nature of the arterial disease in the kidneys in these cases. Friedman found hypertrophy of the elastic and muscular coats, a condition which he regarded as degenerative in this stage in the kidney. This view had been regarded as correct in histological detail, but erroneous in some respects. The changes in the vessels of the kidneys, as well as those in the larger vessels elsewhere, might be explained by excessive tension. That a clear distinction between primary Bright's disease and primary arteriosclerosis could be made, was questioned. He regarded it as probable that all cases of Bright's disease operated primarily by causing changes in the peripheral arteries. In his judgment a large percentage of the cases of the ordinary chronic contracted kidneys not belonging to the arteriosclerotic kidneys on the one hand, or to the cases in which the arteriosclerosis was secondary to the Bright's disease, were the result of the same sort of cause that produced the arteriosclerosis.

Another way in which arteriosclerosis could produce disease of the kidneys was said to be through disease of the heart. In a case of arteriosclerosis with albuminuria and hypertrophy of the heart, with failure of compensation, he did not believe it possible always to determine whether the case was one of true Bright's disease secondary to arteriosclerosis or the result of the failure of circulation and a moderate sclerosis.

In the relationship of arteriosclerosis to diseases of the heart, the most important question was considered to be that of the relationship to hypertrophy of the heart. With the knowledge that there might or might not be hypertrophy in cases of arteriosclerosis, and that it was a matter of the greatest difficulty to coordinate the changes in the arterial system with the heart lesions, the problem presented was not less difficult than that of the relationship of arteriosclerosis to Bright's disease. The hypertrophy of the heart must of course be a response to a demand for increased work. In arteriosclerosis increased blood pressure was the exception rather than the rule, and there were cases of excessive arteriosclerosis without any increased blood pressure or high tension, and in those cases there was no evidence that the heart was called upon for extra work.

Why in some cases of arteriosclerosis there should be hypertrophy of the heart and not in others, was regarded as a question of special interest. From the Leipsic clinic had come the statement that if the sclerosis attacked the large abdominal vessels, the vessels supplied by the splanchnic nerve, hypertrophy of the heart was apt to follow; while if the sclerosis affected mainly the arteries of the extremities, hypertrophy of the heart was not produced. There were, however, occasional instances of marked hypertrophy of the heart without implication of the splanchnic vessels and now and then definite sclerosis of the splanchnic vessels without hypertrophy of the heart. He thought the question was wrapped up in the question of the cause of increased arterial tension in arteriosclerosis. A suggestion by one authority was that there was needed an increased arterial tension, as in heart disease, which condition was not to be interfered with by the drugs of the clinician, the process being a true compensatory one, as the hypertrophy of the heart was in valvular lesions.

The relation of arteriosclerosis to sclerosis of the coronary artery was also considered, and an instance cited in which the sclerosis was practically limited to the coronary artery, resulting in the sudden death of an otherwise perfectly healthy man. Autopsy showed nothing but a little atheromatous patch in one of the coronary arteries which had become the site of a thrombus. Again, the sclerosis might be a part of the general condition and associated with the well known changes in the myocardium, mainly in the form of fibromyocarditis. He regarded the fibroid patches as the result of circulatory disturbance following atrophy and disappearance of muscular fibres and their replacement by a new growth of connective tissue. These fibroid patches, however, he did not consider the cause of the grave symptoms associated with coronary sclerosis, but thought that the disease of the arteries themselves caused the grave symptoms.

The Pathology and Diagnosis of Myocardial Inflammations and Degenerations.—Dr. JUDSON DALAND discussed the relationship of myocarditis to myocardial degeneration, and was of the opinion that most of the common and important diseases of the myocardium were degenerations and not inflammations. Diseases of the heart muscle were subdivided into the inflammations and the degenerations, each of which might be acute or chronic, circumscribed or diffused. Clinically, he subdivided them into acute, chronic, systemic, and mechanical, and stated that myocardial diseases might

be considered clinically as insufficiency of the heart, with or without valve murmur. Brief reference was made to the various forms of myocarditis, and he dwelt particularly upon the importance of chronic fibroid degeneration of the myocardium, or cardio-fibrosis. He agreed with Huchard and others that this disease was a degeneration of the myocardium due to faulty nutrition the result of diminished blood supply to the heart muscle caused by arteriosclerosis, and was opposed to the opinion that it was a chronic interstitial myocarditis.

Fatty degeneration was briefly considered, as well as fatty heart, which he subdivided into (1) simple increase in the epicardial fat, which might envelop the entire heart or follow the grooves of the bloodvessels on the surface of the heart, and (2) an infiltration, the fat extending between the muscle fibres. He laid stress upon the clinical importance of the recognition of anæmia in association with fatty heart, and agreed with Romberg in the belief that cardiac insufficiency, in the obese, was caused by relative smallness and weakness of the heart muscle due to the disproportionate demands made upon the circulation by general corpulency. Brief reference was made to brown atrophy and to amyloid, hyaline, and calcareous degeneration of the heart. The impossibility of diagnosing many cases of myocardial disease was emphasized and illustrated. He also stated that certain of these affections might be diagnosed with a fair degree of probability. He stated that the symptoms of myocardial disease might be grouped under those of cardiac insufficiency, which symptoms were usually absent until dilatation occurred.

Remarks on Cardiovascular Disease, with Reference to Treatment.—Dr. H. A. HARE said that in most cases of vascular disease the heart and kidneys suffered greatly, and that it might be impossible to determine in which of these portions of the body the primary and greatest change had taken place. He spoke particularly with reference to cases in which the vascular change was the dominant factor and in which there was an immoderate degree of arterial tension without any renal lesions demonstrable by the ordinary symptoms or by urinary analysis, the heart sometimes presenting secondary signs of hypertrophy or of feebleness from fatigue or degeneration. Cases had been studied in association with Dr. de Schweinitz from the ophthalmological standpoint, and with the aid of Dr. Stanton, who had used the sphygmometer.

Three types of arterial tension were described: Those in which persistently high tension was due to spasm arising from prolonged nervous stress combined with certain abuses as to habits of life, food, and drink; those in which tension was high, because in addition to spasm there was gradually developing or had already developed fibroid change in the vessels; cases in which after a prolonged period of high tension there more or less suddenly developed persistent low tension in which the arteries are relaxed and distended, so that they resembled veins to some degree in their calibre and compressibility. Cases illustrating these types were cited, with the treatment instituted.

The important points brought out in the paper were as follows: As fibrosis in the peripheral vessels increases, the muscles of the larger vessels undergo hypertrophy, as does also the muscular tissue of the heart. It is quite as possible for vascular compensatory hypertrophy to end in rupture as for cardiac compensatory hypertrophy to do so. This rupture of vascular hypertrophy often gives the heart rest and permits it to recover from its fatigue, and so life is saved. It is possible, if the peripheral fibrosis is arrested, for the vessels also to regain power and a great improvement to occur. The cardiac stimulants are not needed in these cases so much as rest and the skilful use of alteratives

and vascular sedatives. In cases of high tension due to fibrosis the nitrites can be of little value, and the iodides with rest and massage are needful. The concluding portion of the paper dealt with the treatment of valvular and myocardial disease.

Dr. J. C. WILSON said he had been particularly impressed with the classification made by Dr. Stengel, especially with reference to the cases in which the familiar clinical symptoms of arteriosclerosis were not yet manifest. While he did not think Dr. Stengel had made it particularly easy for the clinician to recognize these symptoms under all circumstances, he thought the effort to recognize any condition of ill health occurring under circumstances of arterial change should be systematically practised. He thought that failure to recognize the fact that arteriosclerosis was not always a generalized process led to insistence upon the existence of local manifestations. Perhaps in no group of cases outside the group of general infection was the nosological division of disease more important than in arteriosclerosis. The disposition to look upon the clinical conditions as the result of diseases of the heart, nervous system, kidneys, etc., when the symptoms were really manifestations of the general condition, should be discouraged. He referred to a type of generalized arteriosclerosis observed in immigrants not unlike senile arteriosclerosis in individuals living under more fortunate circumstances.

Dr. GEORGE E. DE SCHWEINITZ referred to his study of lesions in arteriosclerosis in relation to the use of the ophthalmoscope, and exhibited colored charts showing the eye fundus under these conditions. He considered the ophthalmoscope to be of aid in diagnosis, particularly in the preliminary stage, in prognosis, and in regard to the value of therapeutics. By the ophthalmoscope were discernible changes in the course and size of the vessels and changes in translucency and transparency, so that the ordinary retinal vessel became white, with an appearance as if striped with white, hiding whatever it covered. When the changes in the course and size of the vessels gave place to actual sclerotic change, the overlying artery pressed upon the underlying veins. In contrast to the changes observed in arteriosclerosis, there were charts illustrating changes from advanced disease of the kidneys, from syphilitic processes in the eye, and from hæmorrhages and œdema of the retina.

Dr. W. B. STANTON spoke with reference to the condition of the blood pressure in arteriosclerosis. In one of the cases mentioned by Dr. Hare the pressure had been the highest of any instance under his observation.

Dr. JOHN H. MUSSEY said with reference to the classification of arteriosclerosis that in the early periods of the disease this could be only an ætiological one, and to secure relief to the patient the ætiological factor must be determined. States of the nervous system giving rise to heightened blood pressure must be considered as ætiological factors. In the later periods of the disease the classification depended largely upon the organ giving rise to dominating symptoms. A case was cited which Dr. Mussey thought offered great encouragement to all practitioners, that of a patient with well defined arterial changes, extensive supertension, and secondary myocardial symptoms with eye and general vascular changes. The man was desperately ill, the factor of infection being the frontal sinus. Following an operation and drainage there had been a general subsidence of all the general arterial and myocardial symptoms and, apparently, of all renal symptoms. At present the man was engaged in his profession. Dr. Mussey did not agree with Dr. Welch that the finding of an atheromatous patch, as in the case mentioned by Dr. Welch, indicated the limitation of the sclerosis to the coronary artery, but believed that

the process must be general. Arrhythmia in association with arteriosclerosis was being looked upon, not as an unfortunate factor, but rather as a conservative one, and it might occur unassociated with serious myocardial degeneration. He pointed out that if with every third or fourth beat of the heart there was cessation of one, or diminution of the force of one beat, there was given a little rest. He had had cases under his observation for many years showing such arrhythmia even more pronounced, which had been a relief to the patient rather than the opposite. In certain groups of cases he thought, therefore, that arrhythmia need not be considered a grave symptom.

Dr. S. SOLIS COHEN thought that in arteriosclerosis it was important to determine whether or not the symptoms were those of a degenerative process or of a reactive inflammatory one.

Dr. A. O. J. KELLY spoke upon the importance of recognizing arteriosclerosis in its early stages, and thought special effort had been directed to this in late years. He thought this might be facilitated by observation of changes in the heart condition in patients presenting no symptoms referable to the cardiac vascular system. In connection with therapeutics he thought that, in consideration of the power of different organs to adapt themselves to different conditions of physiology and of pathology, the therapeutical deductions should vary in different cases. Because a heart was hypertrophied it need not necessarily be treated. He agreed with Dr. Hare that cardiac stimulants were not always needed, but sometimes cardiac sedatives.

Book Notices.

Clinical Obstetrics. By ROBERT JARDINE, M. D., Edin., M. R. C. E., Eng., F. R. P. and S., Glas., F. R. S., Edin., Professor of Midwifery in St. Mungo's College, Glasgow; Senior Physician to the Glasgow Maternity Hospital, Etc. With Ninety-six Illustrations and a Colored Plate. Second Edition. London: Rebman, Limited. New York: Rebman Company, 1905.

Like all books based on clinical lectures and exemplified by a recital of cases, Jardine's work is sketchy. This does not imply that the subjects of greatest interest and importance are not covered, often in a thorough manner; but it must necessarily be that the separate articles do not present that historical and uniform whole which many readers of books—as opposed to monographs—prefer to possess. That we may not be suspected of even slightly perverting the actual fact, we would refer to the insufficient manner in which such topics as the toxæmia of pregnancy, posterior presentation of the occiput, pyelitis complicating pregnancy, and the vomiting and nausea of pregnancy are considered. Most of the subjects are, to-day, of supreme importance to the entire medical profession, and especially to the medical student, and merely to touch upon them in a work of 600 pages constitutes a literary and a clinical error.

But when we have uttered this criticism, we have said all that we wish to in this direction; for the substance of the work is exceedingly practical. Almost everywhere there abound instructions and warnings which are plainly the outcome of vast personal experience, and these didactic utterances are so well worded that their meaning is unmistakable. Thus, the great obstetric themes eclampsia and sepsis following labor are superbly treated and thoroughly expounded. One may question the clinical possibility of infection from an exposed sewer (page 419), but one will not question the directions for the minute care in every detail with which the author would safeguard the parturient woman.

We commend the work, not as an important and extensive textbook, but as a very practical presentation of the facts of a cardinal branch of medical study.

Miscellany

Artificial Sterilization.—Chrobak, in the *Annals of Gynecology and Padiatry*, refers to the analogue of this operation with the induction of abortion. Partial resection even of large portions of the tubes, with careful ligation of the stumps, do not always secure the desired end. If the tubes are resected through the vagina, it must be remembered that the ovary is thus brought near the uterine horn, and that a fold in the tubal stump may result, which would bring the ovum exactly to the point of closure of the uterine end of the tube, and that in the latter there may be an uteroperitoneal fistula. The most effective method of operating would, therefore, consist in removal of the entire tube, on either side, and amputation and suture of each uterine horn. In the author's opinion an associated operation for sterilization should have clear indications, the same as a primary operation. The indication for sterilization usually occurs in women who are already ill. The indications for the primary operation, include the consent of the patient; this is often impossible in the associated operation; it should, therefore, be done with the written approval of experienced colleagues. It should go without saying, that sterilization is not to be effected merely to suit the pleasure or convenience of women, and in the author's opinion it should never be undertaken except where there is the greatest probability of the incurability of the disease in the given patient, or the permanent danger arising from pregnancy. If there is a chance of cure without sterilization, the operation is not warranted. The Cesarean section is now so nearly free from danger in well appointed hospitals, that one may question the propriety of sterilization merely to prevent the repetition of the operation. Chronic nephritis is an absolute indication for sterilization, and relative indications are chronic anæmia, marasmus, myocarditis, diseases of the stomach, intestine, and liver, emphysema and induration of the lungs. Sterilization in nervous diseases and psychical disturbance is an unsettled question. It must be governed by the gravity of the conditions in each individual case. Sterilization is approved in tuberculosis on very much the same ground that hysterectomy is advocated for carcinoma. The operation is also indicated for those cases in which the uterus has sustained injuries which by reopening in pregnancy or labor may endanger the life of the patient.

Casualties of the Japanese Navy During the Russo-Japanese War.—Shigemichi Suzuki, surgeon general in the Japanese navy, read a very interesting report of his experiences during the Russo-Japanese war at the fourteenth annual meeting of the Association of Military Surgeons of the United States, held at Detroit, Mich., September 26 to 28, 1905 (*Journal of the Association of Military Surgeons of the United States*). The total number of casualties from February, 1904, to August, 1905, was 3,682; of these 1,891 were killed, and 1,791 wounded, of which 117 died afterward. Of the 1,891 deaths, 1,445 were due to shipwrecks caused by submarine mines, and only 563 to wounds received in actual fighting. Of the 1,791 wounded, 647 received wounds requiring hospital treatment, and of these only 32 died. The rest were partly light cases, and partly cases requiring greater care. The 3,682 casualties he classified according to the numbers of wounds (one person receiving often several wounds) as follows, Contusion, 480; abrasion, 212; incised and punctured wounds, 26; wounds with loss of soft tissues, 53; lacerated wounds, 691; blind wounds, 224; perforated wounds, 113; pulverized wounds, 43; mutilated wounds,

129; burns and scalds, 129; concussion of labyrinth, rupture and congestion of tympanic membranes, 116; compound fractures, simple fractures, and dislocations, 237; explosive wounds, 570; asphyxia, 25; drowned, 716; total, 3,764. According to the location of the wounds he gives the following classification: Wounds of the head, face, and neck, 808; wounds of the chest, 157; wounds of the abdomen, 58; wounds of the upper limbs, 625; wounds of the lower limbs, 728; wounds of the back, loin, and buttock, 189; pulverization of whole body, burns and scalds of whole body, 527; asphyxia, 25; drowned, 716; total, 3,833. To be compared with these enumerations should be the health average: Health average for the last three years in ships of the standing and other squadrons: Total percentage of sick, 3.87; total percentage of men in bed, 1.19; total percentage admitted into hospital, 0.66. Health average for 1904 in the combined fleets: Total percentage of sick, 3.32; total percentage of men in bed, 0.72; total percentage admitted into hospital, 0.26. Health average for January to June, 1905, in the combined fleets: Total percentage of sick, 3.01; total percentage in bed, 0.65.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the week ended February 16, 1906:

Smallpox—United States		Cases.		Deaths.	
Places.	Date.				
California—San Francisco	Feb. 27-Feb. 3	21		1	
Dist. of Columbia—Washington	Feb. 3-10	1		1	
Florida—Jacksonville	Feb. 3-10	2			
Florida—Cynthiana	Feb. 3-10	2			
Florida—Española	Feb. 3-10	3			
Georgia—Augusta	Feb. 6-12	5			
Indiana—Allen County	Dec. 1-31			1	
Kentucky—Covington	Feb. 3-10	1			
Louisiana—New Orleans	Feb. 3-10	4			
Maryland—Baltimore	Feb. 3-10	6			
Missouri—St. Louis	Feb. 3-10	6			
Ohio—Cincinnati	Feb. 2-9	7			
South Carolina—Georgetown	Feb. 15	1	Imported		
Tennessee—Memphis	Jan. 24-Feb. 7	5		1	
Wisconsin—Appleton	Feb. 3-10	1			
Wisconsin—La Crosse	Feb. 3-10	1			
Smallpox—Foreign.					
Brazil—Pernambuco	Dec. 15-31			39	
New Brunswick—Kings County	Feb. 4		Present.		
New Brunswick—Queens County	Feb. 4		Present.		
New Brunswick—Sunbury City	Feb. 4		Present.		
New Brunswick—York County	Feb. 4		Present.		
Canada—Toronto	Jan. 27-Feb. 3	1			
China—Shanghai	Dec. 23-30			1	
France—Paris	Jan. 27-Feb. 2	13		2	
Gibraltar	Jan. 1-Feb. 4	5			
Greece—Athens	Jan. 8-15			1	
India—Bombay	Jan. 9-16			2	
India—Calcutta	Dec. 30-Jan. 6			61	
India—Karachi	Jan. 7-14	4		4	
India—Madras	Jan. 6-12			19	
India—Rangoon	Dec. 30-Jan. 6			10	
Italy—General	Jan. 18-25			66	
Japan—Formosa	Dec. 1-31	3			
Russia—Moscow	Dec. 23-Jan. 13	5		3	
Russia—Odessa	Jan. 13-27	38		4	
Russia—St. Petersburg	Dec. 30-Jan. 20	19		7	
Spain—Barcelona	Jan. 21-31			7	
Yellow Fever—Foreign.					
Cuba—Habana	Feb. 11	1			
Honduras—El Paraiso	Jan. 19			1	
Mexico—Merida	Jan. 28-Feb. 3	12		2	
Mexico—Vera Cruz	Jan. 21-27	12		2	
Nicaragua—Managua	Dec. 23-30			1	
Cholera.					
India—Calcutta	Dec. 30-Jan. 6			72	
India—Madras	Jan. 6-12			1	
India—Rangoon	Dec. 30-Jan. 6			3	
Russia—Government of Tomsk	Jan. 4-14	6		2	
Russia—Government of Pskov	Dec. 18-20	21		13	
Plague—Insular.					
Hawaii—Kaui	Feb. 13			2	
Plague—Foreign.					
Africa—Mozambique	Nov. 19-Dec. 6			3	
Africa—Mozambique	Total to Dec. 6	58		28	
India—Bombay	Jan. 9-16			24	
India—Calcutta	Dec. 30-Jan. 6			25	

India—Calcutta	Jan. 7-14	9	8
India—Madras	Jan. 6-12		1
India—Rangoon	Dec. 30-Jan. 6	30	30
India—Bombay	Dec. 1-31	12	12
Japan—Kawaga Ken	To Jan. 10	2	2
Japan—Kebe	To Jan. 10	94	94
Japan—Nara Ken	To Jan. 10	2	2
Japan—Osaka	To Jan. 10	140	140
Japan—Yamaguchi Ken	To Jan. 10	8	1
Manila	Dec. 14-28	7	5
Peking—Gaitan	Jan. 18		200

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending February 17, 1906:

- BAILEY, C. A., Acting Assistant Surgeon. Granted thirty days' leave of absence from February 13, 1906.
- BULLARD, J. T., Acting Assistant Surgeon. Granted leave of absence for thirty days from February 13, 1906.
- CUMMING, H. S., Passed Assistant Surgeon. Relieved from duty at San Francisco Quarantine Station and directed to proceed to Yokohama, Japan, for duty in office of American Consulate, relieving Passed Assistant Surgeon Dunlop Moore.
- IRWIN, FAIRFAX, Surgeon. Detailed as member of Revenue Cutter Service Retiring Board, to meet in Philadelphia, Pa., February 15, 1906.
- OAKLEY, J. H. Passed Assistant Surgeon. Granted leave of absence for one month from March 1, 1906.
- ROBERTSON, H. MCG., Assistant Surgeon. Detailed as member of Revenue Cutter Service Retiring Board to meet in Philadelphia, Pa., February 15, 1906.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army, for the week ending February 17, 1906:

- BARNEY, CHARLES N., First Lieutenant and Assistant Surgeon. Ordered to report on March 12, 1906, to Major Bushnell, surgeon, president of the examining board, General Hospital, Fort Bayard, N. M., for examination to determine his fitness for advancement.
- BUSHNELL, GEORGE E., Major and Surgeon. Appointed a member of a board of officers to meet at the General Hospital, Fort Bayard, N. M., on March 12, 1906, for the examination of such officers of the Medical Department of the United States Army as may be ordered before it to determine their fitness for advancement.
- HALLOCK, H. M., Major and Surgeon. Sick leave of absence extended thirty days.
- HOFF, JOHN VAN R., Colonel and Assistant Surgeon General. Relieved from further duty at Fort Leavenworth, Kansas, and, on expiration of leave of absence, ordered to proceed to Omaha, Nebraska, and report to the commanding general, Department of the Missouri, for duty as chief surgeon of that department.
- HUTTON, PAUL C., Captain and Assistant Surgeon. Appointed a member of a board of officers to meet at the General Hospital, Fort Bayard, N. M., on March 12, 1906, for the examination of such officers of the Medical Department of the United States Army as may be ordered before it to determine their fitness for advancement.
- MUNSON, E. L., Captain and Assistant Surgeon. Appointed a member of a board of officers to meet at the General Hospital, Fort Bayard, N. M., on March 12, 1906, for the examination of such officers of the Medical Department of the United States Army as may be ordered before it to determine their fitness for advancement.
- STEPHENSON, WILLIAM, Major and Surgeon. Granted leave of absence for thirty days.
- WOODSON, R. S., Major and Surgeon. Ordered to proceed from Fort McDowell, California, to the Presidio of San Francisco, to accompany detachment of 1st Battalion, 4th Infantry, to Fort Slocum, N. Y. On completion of this duty will return to proper station.

The following named assistant surgeons have been advanced from the grade of first lieutenant to that of captain, from February 11, 1906: Frederick A. Dale, Charles W. Farr, Paul C. Hutton, Charles R. Reynolds, and William M. Roberts.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 17, 1906:

- BELL, W. H., Surgeon. Ordered to the *Nevada*, February 24, 1906.
- BOGAN, F. M., Passed Assistant Surgeon. Detached from the Naval Hospital, Yokohama, Japan, and ordered home to await orders.
- COOK, F. C., Surgeon. Detached from the *Nevada* and ordered to the Naval Academy.
- KERR, D. B., Surgeon. Detached from the *Boston* and ordered home to await orders.
- MARSTELLER, E. H., Surgeon. Detached from the *Columbia* and ordered home to await orders.
- PAGE, J. E., Surgeon. Detached from the *Franklin* and ordered to the *Columbia*.
- PORTER, F. E., Assistant Surgeon. Detached from the Naval Hospital, New York, N. Y., and ordered to the *Rhode Island*.
- RICHARDSON, R. R., Passed Assistant Surgeon. Detached from the Naval Hospital, Mare Island, Cal., and ordered to the Boston.
- STONE, E. P., Surgeon. Detached from the Naval Academy and ordered to the *Rhode Island*.

Births, Marriages and Deaths.

Married.

BALCH—MANNING.—In Washington, D. C., on Wednesday, February 7th, Dr. Alfred William Balch, United States Navy, and Miss Lucile Bancroft Manning.

MITTENDORF—BORCHERS.—In New York, on Thursday, February 15th, Dr. William Keith Mittendorf and Miss Marie Alvina Borchers.

PACKARD—HORSTMANN.—In Philadelphia, on Saturday, February 9th, Dr. Francis R. Packard and Miss Margaret Horstmann.

PARKER—COLE.—In Detroit, on Tuesday, February 6th, Dr. George J. Parker and Mrs. Imogene S. Cole.

ROBINSON—KISSICK.—In Brooklyn, N. Y., on Monday, February 12th, Dr. Thomas E. Robinson and Miss Violet G. Kissick.

WAHL—LOWTHER.—In Philadelphia, on Saturday, February 10th, Dr. William H. Wahl and Miss Mary Lowther.

Died.

DEHART.—In Trenton, N. J., on Monday, February 12, Dr. Florence DeHart.

DEVEREUX.—In Philadelphia, on Friday, February 9th, Dr. John P. Devereux, aged thirty-four years.

ENGLER.—In Philadelphia, on Thursday, February 8th, Dr. Robert Saylor Engler, aged thirty-one years.

FERGUSON.—In Camden, N. J., on Monday, February 12th, Dr. Benjamin D. Ferguson, aged fifty-three years.

HENSLEY.—In Lexington, Tennessee, on Friday, February 9th, Dr. M. G. Hensley.

LONDON.—In Newark, N. Y., on Friday, February 9th, Dr. Newell E. London.

LEMKE.—In Los Angeles, California, on Saturday, January 6th, Dr. A. F. Lemke.

McKENZIE.—In Metuchen, N. J., on Wednesday, February 14th, Dr. William V. McKenzie.

MALLOY.—In New York, on Saturday, February 10th, Dr. Henry Malloy.

MANN.—In Liberal, Kansas on Tuesday, February 6th, Dr. J. E. Mann, of Louisville, Kentucky.

ROGERS.—In New York, on Sunday, February 11th, Dr. Pennock Browning Rogers.

SHOEMAKER.—In Georgetown, D. C., on Thursday, February 8th, Dr. William L. Shoemaker, aged eighty-three years.

STANTON.—In Minneapolis, on Saturday, February 3rd, Dr. Charles M. Stanton, aged forty-seven years.

STARR.—In Washington, D. C., on Saturday, February 3rd, Dr. D. Haven Starr, aged twenty-seven years.

WOOSTER.—In Butterworth, Michigan, on Tuesday, February 6th, Dr. Samuel R. Wooster, aged seventy-six years.

New York Medical Journal

INCORPORATING THE

Philadelphia Medical Journal and The Medical News

A Weekly Review of Medicine

VOL. LXXXIII, No. 9.

NEW YORK, MARCH 3, 1906.

WHOLE No. 1422.

Original Communications.

A POINT IN THE TECHNIQUE OF BREAST AMPUTATION FOR CANCER.

By ROBERT F. WEIR, M. D., F. R. C. S., Hon.,
NEW YORK.

In the days of my student life the logical surgeon who then believed that cancer of the breast was but a local manifestation of a constitutional disease, acted in accordance with this view, by either doing nothing or in a very palliative manner removing only the tumor and leaving the apparently healthy portion of the breast undisturbed. The bolder or more hopeful surgeons of that time, 1850 to 1860, would, however remove the whole breast and, when enlarged glands were plainly felt through the skin in the axilla, would try literally to dig them out, doing this in a rather bungling way, by a moderate enlargement of the wound into the axilla and with often complication of a serious injury to the axillary vein. Later Bickersteth, of Liverpool, showed that the safe way to empty the axilla and to avoid such a risk was to expose as early as possible the axillary vein and to work downward from that point. To this was shortly afterwards added a very important advance, as for the functional result of this improved mammary amputation. For the zeal manifested in cleaning out the axilla frequently led to injury of the middle subscapular nerve which runs alongside the subscapular vessels, and which supplies the teres major muscle with functional power. The result was permanent impairment of the arm motion. This damage once appreciated was easily avoided. The cures as we now understand this word, in connection with malignant growths, had been in the simple ablations of the breast, roughly speaking about eight to ten per cent., advanced under the more thorough cleaning out of the axilla, until it reached from fifteen to twenty per cent. of the cases.

A further step towards perfection was made by Heidenheim's anatomical revelations. He showed that the cancer infections not only progressed towards the trunk through the axilla from the breast but also by way of the pectoral muscle and its sheath. This fact led, by two or three minor steps, to the present improved operation known variously as the radical operation of Hal-

sted or Meyer, and which consists, as is well known, in the wide removal of the breast and of both the pectoralis muscle, major and minor, with the emptying of the axilla, and dissecting away in a careful and thorough manner of all the lymphatic bearing fat tissue below the clavicle. Only the small clavicular portion of the pectoralis major muscle is retained which time has shown to be ample to preserve all the needed motion of the arm. With this operative completeness the cures, that is to say the freedom from return of the disease for three years or more, have gone from twenty to nearly fifty in a hundred cases. Recently Crile published a series of fifty-four cases in which only the mamma was invaded (called by him the "favorable" cases). In these he has had the fine result of eighty per cent. of cures, though it must be added that when his thirty-seven other cases with glandular involvement are added to the favorable ones his showing is about the same as Halsted's, that is to say, about forty-seven per cent. of three year cures.

Halsted, in addition to the radical operation which bears his name and is generally practiced by surgeons, went still further and showed that in some instances the rule that when the supraclavicular glands became enlarged the disease was beyond surgical relief, was a too stringent one. By him and others these glands have been attacked either by an incision opening the posterior triangle of the neck, or by the more severe and unnecessary procedure of sawing through the clavicle and thus exposing the supraclavicular space from an incision enlarging the breast wound upwards. The encouragement he has given to further effort in this direction only bears out the general rule that now firmly exists in all operations for cancer. This is, that all glands and lymph channels leading from the malignant focus should be examined and treated surgically if felt or seen to be involved. To carry out this rule in breast amputations it is necessary to open up and examine the supraclavicular region in each case where glands are found cancerously enlarged in the axilla. This is a proper precaution, but to avoid this additional incision I have been led to a little procedure which is the gist of my preliminary remark.

Some eight or ten years ago and certainly before the muscle removing or radical operations came into vogue I found that in following up the enlarged lymphatic glands to the very point where the axillary vessels pass under the clavicle,

I could often carry my finger under the clavicle to one of the sides of the vessels by pulling the arm vertically upwards and thus reach the gland, etc., well under and slightly above the clavicle. This became a fixed rule with me and I have employed it somewhat amplified in every breast amputation that I undertake. Where no enlarged glands can be felt through the skin of the neck the little or forefinger can be carried in this way under or beyond the clavicle its full depth into the neck and the supraclavicular space behind the sternomastoid muscle fully explored. If enlarged glands are found in the region the customary incision is made along the edge of the clavicle to the root of the sternomastoid muscle and up a short distance along its posterior border the space cleaned out of glands and fat tissue. If nothing is found, the breast wound is closed as is usual, save that I prefer to place a small cigarette drain in the hole bored alongside the vessels to be withdrawn at the end of twenty-four or forty-eight hours.

This method of exploration has been tested so many times by me that I can commend it to my surgical colleagues. As an additional reason for the extended use of this digital exploration, it need only be recalled that in nearly one half the cases (forty-seven per cent.) enlarged glands have been found where they could not be recognized by examination before the axilla was opened. A similar outcome has been met with in the neck in many instance though of course not as frequent a degree as in the axilla.

30 WEST FIFTIETH STREET.

TWO CASES OF ANGIONEUROTIC OEDEMA WITH ASSOCIATED NERVOUS AND MEN- TAL SYMPTOMS.*

By THEODORE DILLER, M. D.,

PITTSBURGH,

NEUROLOGIST TO THE ALLEGHENY GENERAL HOSPITAL;
VISITING PHYSICIAN TO THE INSANE DEPARTMENT
OF ST. FRANCIS HOSPITAL.

This disease or symptom complex is sometimes known as Quincke's disease or acute circumscribed oedema; and by some of the older writers like Milton as giant urticaria. It is also called fleeting oedema. Quincke, in 1882, under the name *das acute umschriebene Oedem*, described, in an epoch making monograph, the symptom complex, as follows: "In the skin and subcutaneous tissues appear circumscribed oedematous swellings from two to ten centimetres in diameter. The extremities are most frequently affected, especially in the neighborhood of the joints; but the face and the buttocks are also involved. The swellings are not sharply separated; the normal color of the skin is not often markedly changed, although it is sometimes whiter and sometimes redder than normal. There is some tension and itching. The mucous membranes may also be involved, the lips, the soft palate, the pharynx, the larynx, the bowel, and stomach mucous membranes. The swelling appears and disappears quickly, in the course of an hour, or at most a day, but recurs fre-

quently. The general condition tends little or not at all to be disturbed. The disease is closely related to urticaria, from which it may be impossible to separate it."

Since the publication of Quincke's description of the disease, many papers on the subject have appeared, by far the most complete being that by Cassirer in 1901, who, in the bibliography attached to his monograph, mentions 220 references, 60 of which are in the English language. A few important contributions as, e. g., that of Milton, preceded Quincke's. Cassirer collected 160 cases from this literature as the basis of his study. I have been able to find references to 43 cases reported since the date of Cassirer's monograph. The number of cases published up to date is therefore well over 200.

The symptom complex may appear at any age, but affects persons under 40 years of age with greatest frequency. Crozier Griffith reports a case in an infant one and one half months old; and Raven one in a woman of 86 years.

A number of instances have been recorded where the affection was hereditary. Osler reports an oedematous family in which it appeared in 22 members through five generations. Again while one member of a family may be affected with angioneurotic oedema another is affected with some allied angioneurosis or trophoneurosis.

In many cases migraine was present in the ascendants, while in other cases epilepsy, chorea, or parietic dementia was ascertained to have been present in some member of the patient's family. Frequently a neuropathic personal and family history was recorded.

Among the provoking causes of the affection, an exhausted general condition appears to stand first. Rheumatism, gout, alcohol, tobacco, malaria, and trauma, are among the assigned causes. In contrast with urticaria, the character of the food seems unimportant as an aetiological factor. A number of drugs as antipyrine produce an eruption like that of angioneurotic oedema. It has been found associated with various organic diseases, leprosy, hydrocephalus, transverse myelitis, tabes, Graves's disease, myxoedema, etc., and with various psychoses and neuroses.

In many cases neurasthenic and hysterical symptoms were present; and a neuropathic temperament commonly obtained. But the true hysterical oedema of Charcot, according to Cassirer, differs from angioneurotic oedema.

The eruption usually develops rapidly, occasionally preceded by prodromal symptoms such as sense of exhaustion, chilliness, loss of appetite, etc. It consists of firm, elastic circumscribed swellings of the skin of variable size, the color of which, as a rule, differs little from that of the normal skin. The swelling quickly disappears after a few minutes or hours. It is generally unattended by pain or fever. The size of the swellings varies greatly, from the size of a quarter dollar to that of the hand, and is due for the most part to oedema of the subcutaneous tissues. There may be one or many attacks; and the intervals between them is extremely variable. Gevart, Matas, and Hartzell each report cases where the oedema was of daily occurrence. Months or years may elapse between the attacks. In a case reported by Salles only four attacks occurred in

* Read before the Pittsburgh Academy of Medicine.

twenty-five years. An outbreak may consist of one or two or many patches of eruption; and no more than a single outbreak may occur.

In some reported cases the skin was red and painful; in two of Ewing's cases the swelling was a "dusky red" and this discoloration persisted for a time after the œdema subsided. These cases are naturally difficult to separate from those of urticaria. In such cases the temperature during the eruption is raised instead of lowered, as is usual.

The swellings may appear with absolutely no subjective phenomena as itching, burning, etc., although such phenomena are frequently present. In a few cases there was an exudation of blood from the swellings.

The swellings may appear on any part of the body. The lips, cheeks, and eyelids are frequently involved, the scalp seldom. Of the extremities, the hands are most frequently involved. The genitalia were involved in a number of cases.

The œdema may appear with great regularity at a stated time each day as in cases reported by Hartzell, Matas, and Gavaert, and as in one of my own cases; or a definite number of days may intervene between the outbreaks of the œdema. In an interesting case reported by Ewing before this Academy, that of a clergyman aged 42 years, an œdematous swelling of the right eye begun with great regularity each week while he was engaged in preparing his Sunday's sermon.

In other instances, as in two of Ewing's series of four cases, the œdema could be produced at will by psychic influence. Here one would naturally suspect an hysterical basis. Cases are reported in which the larynx, the pharynx, the tongue, the gums, the soft palate and uvula, the nasal mucous membrane, and the conjunctiva were the seat of the œdema. In Morris's case, which came to autopsy, laryngeal œdema proved fatal. Schlesinger believes certain forms of nervous asthma may be due to Quincke's œdema. A species of croup and of pulmonary œdema are by other authors attributed to the same cause.

A large number of writers hold that a certain train of symptoms referable to the stomach and bowels are due to fleeting œdema of these organs. These symptoms consist of more or less severe pains in the abdomen with a feeling of tension, loss of appetite and vomiting, at first of stomach contents, and later of watery material, the whole attack lasting three or four hours.

As to the gastrointestinal symptoms, I shall only mention that where periodical vomiting and diarrhœa occur it is well to bear in mind the possibility of angioneurotic œdema; but I cannot see how this diagnosis could be made with any degree of certainty. In one reported case, however, that of Morris, lavage of the stomach at the beginning of an attack brought up a bit of the stomach mucous membrane. Microscopical examination showed it to be œdematous, but not inflammatory. This patient had been for twelve years subject to œdematous swellings of various parts of the body including the larynx. He finally died of œdema of the larynx.

Intermittent dropsy of the joints is believed by Schlesinger to be due to fleeting œdema. Quincke and Gross report a case where œdema took place under the periostium as well as under the skin.

Sykes observed a 32 year old woman who, for a long time, was subject to watery diarrhœa, coughing and panting attacks with difficult expectoration (mucous not purulent) attacks of dyspnoea, outbreaks of sweating and hysterical paroxysms. Signs of organic disease, especially tuberculosis, were absent. Sykes believes that these manifestations were due to a vasomotor neurosis of changing location.

Angioneurotic œdema has been found associated with and more or less closely related to a considerable number of diseases, but especially to urticaria, hysterical œdema and to the various angioneuroses and trophoneuroses, viz., acroparæsthesia, erithromelalgia, Raynaud's disease, scleroderma and multiple cutaneous gangrene. Fürstner, for example, reports the cases of a mother of fifty and a daughter of sixteen who were affected and where the disease terminated in scleroderma. Alessi saw an attack of pulmonary œdema in an epileptic which he regarded as an epileptic equivalent.

A few years ago I reported a case of myasthenia gravis in a woman twenty-nine years old who, coincidentally with a rise of temperature to 103°, which lasted three days, developed several large painful patches of circumscribed œdema, over the arms, trunk and buttocks, the largest being the size of the hand. They developed quickly, one at a time, and disappeared rapidly. Five days elapsed from the appearance of the first patch until the disappearance of the last one. The swellings were noninflammatory, but very painful. There was no recurrence; and no special cause for the œdema could be assigned.

So far as I know this is the only instance where angioneurotic œdema complicated myasthenia gravis. The case seems to have been an atypical one in two features, the development of fever with the eruption and the pain accompanying the swellings. This association becomes interesting because myasthenia gravis as well as circumscribed œdema by some is believed to be due to fault in the sympathetic apparatus. Cases in which urticaria and Quincke's œdema appeared successively in the same patient have been recorded.

As to the pathogenesis of the affection all authors are agreed that it is to be accounted as a nervous disease and that the œdema is due to a faulty operation of the sympathetic nervous apparatus. But as to the exact mechanism of the production of the œdema there exists anything but agreement among the various writers on the subject.

Yet there is some dissent to this view, as will appear by the two following observations: Verwaek reports four members of one family affected with what he calls acute hereditary œdema. He believes with Calvé that Quincke's œdema is due to intoxication arising from the digestive tube to malfunction of the vasomotor apparatus. Mendel reports the case of a girl of eighteen years affected with acute œdema involving the left upper extremity. Since infancy she has been subject to œdema of various parts of her body, which appears quickly, lasts a few minutes up to a week, and disappears quickly. Several members of the family were similarly affected. Mendel regarded the affection as toxic, of intestinal origin, and not a neurosis.

There are two common theories for the explanation of œdema. (1) That it is due to a simple

process of filtration from the blood vessels into the subcutaneous tissues due to a damming up of the circulation and dependent on blood pressure. (2) That it is due to alteration in the constituents of the blood, which permits an escape of its fluid constituents into the subcutaneous tissue, so called cachectic œdema.

Neither theory seems adequate to explain Quincke's œdema. The cachectic theory of œdema seems unsatisfactory when the good general condition of the patient is considered; and when the fleeting character of the œdema, its circumscribed area, the fact that it does not readily pit on pressure and that evidence of cyanosis or congestion are generally absent are considered, the mechanical damming or increased pressure theory seems inadequate. Unna's theory that an irritation of the vasoconstrictors of the veins in local areas leads to hyperæmia and œdema is objectionable for the same reasons and for the additional reasons that evidences of hyperæmia are lacking and that the poorly developed constrictor muscles of the venous walls would be inadequate to set up so much pressure, especially when it is remembered that in health greatly increased blood pressure alone does not lead to œdema.

Certain writers explain the phenomena through a nervous influence on the cells of the capillaries by reason of which a transudate of the contents is permitted; and this view is probably less objectionable than the preceding ones. The numerous cases where the disease was inherited or appeared in brothers and sisters, the frequent existence of a neuropathic temperament in the subjects of the disease and the common association of the disease with other nervous phenomena in the same patient, are considerations which, taken together, argue for the nervous character of the affection. Yet a neuropathic temperament does not seem to be essential. Cases due to an infection or intoxication have been reported; but such cases more nearly resemble urticaria and a few partook of the character of rheumatic puerpura, and perhaps should not be regarded as cases of Quincke's œdema. The eruption usually occurs but once, and does not recur as a rule. While in the cases more strictly to be accounted as those of fleeting œdema, the cause is within, i. e., in the individual's hereditary make up, and but little dependent upon diet or external circumstances and the œdema commonly recurs from time to time.

The difficult question arises as to whether Quincke's œdema is to be regarded as a mere symptom complex or as a disease entity. If all the cases reported as such were allowed to be cases of fleeting œdema it would surely lack sufficient characteristics of coherence to be considered as a disease in itself; but if only the more typical ones were accepted some argument could be made for it as a disease entity. Such a separation would be difficult, often times, and would have to be made more or less arbitrarily.

Typical cases of Quincke's œdema and of urticaria differ markedly. The swellings in urticaria are much smaller, deep red or pinkish in color, hot and very itchy and often attended by fever. This forms a marked contrast to the very large, pale, cool, nonitchy œdematous swellings of the typical Quincke's disease.

The wheals of urticaria, however, vary consid-

erably in size, shape and color. They may be whitish, pinkish or reddish. They develop suddenly, oftentimes in the course of a few minutes. They disappear shortly, often within an hour or two. The wheals may be few or many and may come in successive crops. They always give rise to severe burning and itching sensations. The similarity to fleeting œdema is often striking and it differs from it chiefly in the fact that urticaria is more dependent upon ingested food than œdema, the wheals are smaller and produce distress; while fleeting œdema tends to recur with more or less regularity and is if anything more of a nervous disease than urticaria. The swelling is due to a true œdema which has its seat in the skin and subcutaneous tissues, chiefly the latter, and not to an inflammation. Ebstein, however, reports a case of circumscribed inflammation of the skin (lip and preface) accompanied by fever which he believes to have developed on an angioneurotic basis, but which he believes should be sharply separated from Quincke's œdema.

Gilchrist in eight cases of urticaria produced wheals artificially by drawing the finger nail over the skin and then excised bits of skin over the wheal. His findings were practically the same in all these cases. The epidermis was unaltered while the corium was the seat of acute inflammatory changes. The same changes were observed in a spontaneous wheal which was also excised. These changes were in marked contrast to those observed by Gilchrist in a section from the œdematous leg of a negro where the corium was œdematous, but showed no inflammatory changes.

But in both fleeting œdema and urticaria a nervous predisposition and heredity commonly obtain. The family type is not found in so pronounced a degree in urticaria as in Quincke's disease. On the other hand autointoxication plays a far more important role for urticaria than for fleeting œdema. There are cases, however, in which a differential diagnosis cannot be made with any certainty. Moreover cases have been reported where the patient in one attack appeared to suffer from urticaria and in other attacks from Quincke's œdema, and still other cases in which both varieties of eruptions coexisted at the same time.

Various drugs, such as antipyrine, may produce an œdema; and it seems likely that a few so called cases of Quincke's disease are attributable to this source.

œdema may occur as a hysterical manifestation, and to distinguish it from Quincke's disease is often a difficult or impossible problem. Gilles de la Tourette states that in hysterical œdema the face is unaffected; and by Collins, Norton, and others the presence of hysterical stigmata, a less acute course and the presence of but a single swelling all argue for the diagnosis of hysterical œdema. The swellings are more isolated and circumscribed and may remain in the same place for weeks at a time.

Blue and white hysterical œdema have been described by Charcot, and the latter form also many years before by Sydenham. This may be regarded as an acute or chronic trophœdema.

Two cases of hysterical œdema have been reported by Lannois and Lancon, the first in a fifteen year old girl who, two months previously, had a sudden œdema of the left hand and forearm, dis-

appearing in two days, reappearing fifteen days later. Under four massage treatments it disappeared. The second case was one of long duration affecting the entire left upper extremity. The patient, who had undoubted stigmata of hysteria, after a stay of several months, left the hospital unimproved. Lavastine exhibited at the Paris neurological society a twenty-eight year old woman who, three years before, had been seized with chronic white œdema of the left foot. This gradually involved the leg, then the thigh. Recently the right thigh became involved. Thorough search failed to reveal the stigmata of hysteria or evidence of visceral, or blood, or bone disease. It was therefore believed by the reporters to be a case of œdema of nervous origin, either Quincke's œdema or trophoœdema of Meige.

These authors make the following useful classification of the œdemas: 1. Acute œdema, (a) infections (carbuncle, erysipelas, etc.), and (b) Quincke's œdema. 2. Hysterical œdema. 3. Chronic œdema, (a) from diseases of heart, vessels, kidneys, cachexia, and nerves, (b) chronic œdema of elephantiasis, (c) chronic trophoœdema (Meige).

Cassirer reports the case of a pronounced hysterical patient who, following excitement, would rapidly develop œdematous swellings generally on the face, upper lip, cheek, eyelid and, occasionally, on the trunk. The swellings always came singly, were pale, nonitching, developed rapidly in a few minutes and disappeared in from an hour to half a day. Besides these attacks the patient often developed urticaria after taking certain food. Finally she developed a simple erythema. The mother was affected with hysteria. Cassirer asks the question as to whether this was a case of hysteria plus acute œdema and is inclined to answer it in the affirmative because of the site and fleeting character of the œdema and of the failure of motor and sensory disturbances in the affected parts. As will be seen later this same question presents itself regarding one of my own cases.

Certain cases where the œdema was of gradual development, of long standing and which involved extensive areas, as a leg, arm, etc., have been reported by various authors as varieties of Quincke's disease or as allied to it. Devobe, for example, reports the case of a twenty-two year old woman who, in the course of nine months, developed an œdema of both legs which begun in the knees. In another twenty-two year old woman observed by Vigoroux œdema of one leg had existed for nine years. Milroy reports a remarkable case of a man aged thirty-one years with œdema of both legs below the knees which had been present since birth. The legs were of a reddish color. Pressure caused the color to disappear only to rapidly reappear. In six generations of this family, numbering ninety-seven individuals, twenty-two members were similarly affected. Meige reports eight cases of œdema in four generations which developed gradually about the age of puberty and involved the feet, legs, and finally the entire lower extremities. The œdema was white, firm, painless. Hertoghe has recorded the case of a nine year old boy who, following measles, developed a painless, œdematous swelling of the right leg which continued four years. The same author also details the cases of two sisters aged twenty-one and fifteen

years respectively, one of whom exhibited an enormous trophic œdema of the face, while the other was affected with infantile myxœdema. Hertoghe has also recorded a case of trophic œdema of the left leg. Collet and Beuttner observed a twenty-seven year old woman affected since birth with œdema of the entire left arm. Ralleston describes two cases of hereditary persistent œdema of the lower extremities which he observed in two sisters aged sixteen and thirteen years respectively. The mother had been similarly affected thirty-five years previously.

Lannois reports the case of an epileptic woman aged forty who for twenty years had had an enormous white, painless œdematous swelling of the right leg. This same author reports the case of a family affected with trophoœdema in which the father was affected with epilepsy. Œdemas in epileptics, more or less generalized and more or less persistent, have been reported by Fère, Teissier, and Lecreux and Roue.

Klippel and Vigoroux have studied vasoparalytic œdemas in general paretics. The seat is variable, arms, legs, hands, unilateral or bilateral. Sainton and Voisin report the case of a young man who was affected with a persistent trophoœdema of the right leg which was painless. The skin was thick and infiltrated. The patient's father had for fifteen years been affected with vasomotor disturbance in the shape of local asphyxias. Crepin has studied rheumatic œdema and the various arthritic œdemas. He believes they are of neuropathic origin, and closely related to Quincke's œdema. He recognized two varieties, one due to vasodilatation, the other to vasoconstriction.

The treatment need not detain us. It must depend upon the individual case and the conditions associated with the œdema. Rest, diet, hydrotherapy, elimination, massage, vasomotor and general tonics with helpful mental suggestion, would naturally present themselves as the chief features of the treatment.

With this brief and inadequate consideration of this extremely interesting subject I shall proceed to the description of two cases of angioneurotic œdema which I believe are well worthy of record.

CASE I.—The first case is that of a lady, aged 26 years, whom I saw September 8, 1904, for the first time and who had been married six months. At the time of her marriage she was tired out, on the point of a "nervous collapse." A brother whom I saw is extremely nervous, of a markedly neuropathic temperament. Her childhood was very unhappy, due chiefly to lack of understanding and sympathy between herself and her stepmother. She was quite well, however, until the age of twelve years. Then she began to grow weary and to tire readily. She went to a woman's college from which she was graduated three years ago. While there she was always tired and lacked interest in her work. This seemed to her "like excessive laziness." She did not care for ordinary sports. She was out of school for two whole years because of ill health. Two years ago, a year after leaving college, she was seized with an attack of typhoid fever. She suffered several relapses. Once she was unconscious for four hours. Finally her health seemed fully restored and remained so for a period of two months, when she became nervous and emotional. She was often in tears. To use her own words: "I was hysterical at times, exceedingly worried, then exceedingly pleased over nothing." In November, 1903 (nineteen months be-

fore I saw her) she suffered from severe "neuralgia" on both sides of her face, but always confined to one side at a time. Such attacks would last a week usually and always followed emotional outbreaks.

The patient thinks that her general health, aside from the nervous attacks to be described, is better since her attack of typhoid fever than it was before.

Since June, 1903 (a period of 15 months), she has been subject to attacks of swellings of the skin which were slight at first but which lately have grown much more pronounced and severe. These attacks begin by moderate itching in the palms of the hands; then welts raise which look like worms under the skin. All portions of the body have been involved during the various attacks. Different parts are involved in different attacks. At first only a few patches of swelling appeared; but now the number and the area involved have much increased. Attacks always begin in the hands. In the attacks the skin is raised and white; and around it is an area of red skin. The eruption itches somewhat but is not painful. The patient compares it to a mass of mosquito bites. The swellings are irregular in size and shape. They usually appear in the evening, seldom in the afternoon. Of late they appear nearly every night. They come and go within a period of fifteen minutes. Often the swelling is confined to the hands. It may involve the hands successively or simultaneously. One night the right hand only was involved. The night before that the knees were involved. The patient observed "if an attack is not severe I can reason myself out of it."

In April, 1904, the patient was much impressed by a performance of *Dr. Jekyll and Mr. Hyde* given by Mr. Mansfield. Since then she has been subject to attacks of terror at dusk. Then by looking into a dark corner at any time she can see an outstretched crouching figure. She knows perfectly well that this is a sense deception. But in her efforts to eliminate it she remarks that "common sense does not seem to have any effect." She is afraid to stay in the house at night alone. "I know I would be in a state of terror if I did."

Examination.—The patient presents nothing very noteworthy. Her general appearance and color are good. Her weight is 144 pounds. Physical examination is negative; no dermatography. The skin seems quite normal. She is stubbornly constipated and sleeps poorly. On the mental side the patient is an intelligent, educated and cultured woman who exhibits no especial peculiarities.

September 12, 1904, (four days after examination). The swelling on the hands occurs every night. The patient saw a young girl at her room door last night. She asked her to come in when the figure suddenly disappeared. She heard knocking at the door several times. She felt sure this too was a trick of the senses; but to make quite sure she asked some friends to come in and listen for the knocking, too. They could not hear it; and then she became convinced there was really no knocking. She laughs about these tricks of the senses; but says they are annoying and wishes to be rid of them.

September 21. Very much better in every way.

September 23. Œdema on the hands for fifteen minutes last night, which she attributes to worry over the loss of two favorite dogs. She does not see the visions in the dark.

October 3. Of late the swelling on the hands has occurred every night. The visions are disappearing.

October 5. The hand swellings continue. Last night the swelling appeared on the feet also.

October 15. Patient reports herself "perfectly well." For a week past she has been free from any œdema and from hallucinations.

February 13, 1905. (Four months later.) The re-

port reached me that the patient continues in good health.

By way of treatment the patient was put on a semi-rest cure, given hydrotherapy, massage; and a strong effort was made to surround her with helpful mental suggestions. The static breeze was one of the minor helps. By way of drugs, she was at first given fairly good sized doses of bromides and later the elixir of iron, quinine, and strychnine. Her constipation was corrected by cascara sagrada and her insomnia by veronal.

In this case then we have the history of a neurotic woman who for years had been neurasthenic; who married in a tired, exhausted condition; who had been subject to periodic outbreaks of œdema for a period of fifteen months. She was attacked with vivid auditory and visual hallucinations.

Here it would seem quite clear that the neurasthenic, hysterical and hallucinatory manifestations as well as those of œdema were dependent upon her neuropathic temperament plus exhaustion. To call this simply a case of angioneurotic œdema is only telling part of the story; for the œdema was only one of the several manifestations of nervous instability and exhaustion.

CASE II.—The second case is that of a married woman aged 51 years. Both parents died at the age of 72. Her mother was for many years subject to attacks of asthma. She has two sisters of nervous temperament. The patient has four children living, while one is dead. A miscarriage occurred between the births of the second and third child. Her menses ceased at the age of 36. The patient was quite well as a young girl and in her earlier married life. Her health began to fail 21 years ago, i. e., when she was 32 years old. She took a "cold" just after her second youngest child was born, characterized by running at the nose. This continued for about a year when she began to suffer from asthmatic paroxysms characterized by dyspnoea and wheezing with smothering sensation accompanied by severe coughing efforts. Such paroxysms would last about 24 hours; and they at first occurred about twice a month, as the patient puts it, "Whenever I would take a cold." She was subject to these paroxysms up to seven or eight years ago, since which time she has been free from them. She was subject therefore to these attacks during a period of 12 or 13 years. With the passing of the asthmatic paroxysms she became at once subject to attacks of headache. These attacks occurred at the rate of two or three a month at first, but they have gradually increased in frequency until the present time; and they are now occurring at the rate of about two or three a week. These attacks usually begin about 4 o'clock in the morning and last about twelve hours.

An attack begins by pain in the pit of the stomach which goes to the small of the back and up the back to the occiput. This march consumes about one minute. The pain now spreads from the occiput to the temples and from thence to the forehead and then all over the head. But the pain is always most severe in the occiput. The pain is about equal on both sides of the head. These attacks were never but once accompanied by vomiting. They compel her to lie down; and she must have some one to hold on. Between the attacks the patient feels well.

For two and a half years past the patient has been subject, besides the headaches just described, to periodical swellings on the skin of short duration. These swellings, which generally occur in the evening, are of almost daily occurrence. The patient describes them as like unto mosquito bites at first. The skin raises in great welts in various parts of the body. Each

swelling at its height stands well above the level of the surrounding skin. The patches are large, two, three, four and even five inches in length and half or third as wide. The length of a patch or eruption always coincides with the axis of a limb upon which it may be situated. After persisting about three or four hours the swellings rather quickly disappear. They occur most frequently on the arms, shoulders, and back, and between the shoulders, also occasionally on the thighs and feet, seldom on the legs, and never on the face, abdomen or chest. While for the past two and a half years subject to these attacks of headache and œdema, the patient has never suffered from both kinds of attacks at the same time.

Between these frequent attacks of headache and œdema, the patient feels very well, except that she is subject to some jaggings sensations between the arms and shoulders and along the spine. Her weight is 108 pounds. She sleeps well when free from these œdematous swellings.

A pretty complete physical examination revealed nothing of note. To my great regret, the patient absolutely refused to go to the hospital for further observation and for treatment.

In this extremely interesting case, it would seem that the instability of this woman's nervous system had to manifest itself in some manner, first in "cold in the head," then in asthma, then in headaches, and finally in headaches alternating with fleeting œdema.

As in the first case, this is one of a great deal more importance than Quincke's œdema which was only one of the several manifestations of the patient's nervous instability.

The review of the literature of the subject and the study of these two cases only strengthens my growing conviction that disease entities are few in number if indeed they exist at all and that various groups of more or less distinct disease manifestations more or less closely approach each other. Atypical and transitional types of disease are seen on all hands. Quincke's œdema is closely related to half a dozen œdemas and distantly related to a score of diseases. It appears in typical form as the only manifestation of disease; it is seen again in many atypical forms, and in association with a host of other disease manifestations. The two most constant elements in its production, viz., a neuropathic constitution and exhaustion, are capable of setting up an infinite variety of morbid phenomena.

While in a strictly scientific sense there is no such disease as angioneurotic œdema, for practical clinical purposes it may be allowed as such, it seems to me, for practical purposes.

It has occurred to me that circumscribed œdema might be compared to convulsions. They vary considerably in their manifestations. They may be the only apparent expression of disease or one of several or many. In some cases the cause is evident while in others it is obscure. The convulsion alone does not constitute the disease nor does the œdema.

BIBLIOGRAPHY.

Cassirer. *Vasomotorisch-trophische Neurosen*, Berlin, 1901. S. Karger.

To this exhaustive monograph a bibliography containing 220 references is appended to which the reader is referred. The references which follow are to papers which have appeared since 1901, the date of Cassirer's monograph.

Alessi. *Clinica moderna*, June 1, 1904.

Colvé. *Thèse de Paris*, 1901.

Chisholm. *Fort Wayne Medical Journal*, Feb., 1902.

Collet and Beutter. Œdème congénital du membre supérieur, *Lyon médical*, 1903, p. 545.

Collet and Beutter. *Lyon médical*, April 5, 1903.

Coulin. *Thèse de Paris*, July 18, 1902.

Deeks. *Montreal Medical Journal*, xxxi, p. 507 and 508, 1902.

DeSanti. *Proceedings of the Laryngological Society of London*, iii, p. 87, 1902.

Diller. A Case of Myaesthesia Gravis Complicated by Angioneurotic Œdema, *Journal of Nervous and Mental Disease*, 1903, p. 213.

Ebstein. Ueber akute umschriebene Hautentzündungen auf angioneurotischer Basis. *Virchow's Archiv*, clxxiv, p. 163.

Ewing. Unpublished paper read before Pittsburgh Academy of Medicine.

Fairbanks. Hereditary Œdema, *Journal of the American Medical Association*, May, 1904.

Feindel. Le Trophoédème chronique, *Gazette hebdomadaire de médecine*, 1902, No. 15, p. 157.

Fulchenfeld. Fall von neurotischem Oedem. *Deutsche medizinische Wochenschrift*, 1903, p. 253.

Fürstner. Zur Kenntniss der vasomotorischen Störungen. *Mitteilungen aus dem Grenzgebiet der Medizin und Chirurgie*, xi, p. 159, 1903.

Fürstner. Zur Kenntniss der vasomotorischen Neurosen, *Neurologisches Centralblatt*, 1902, p. 629.

Gilchrist. *Dühring on Skin Diseases*.

Garel et Bonnamour. *Annales des maladies de l'oreille*, xxix, p. 1-42.

Gorin. Angioneurotic œdema; report of a case. *St. Louis Courier of Medicine*, August, 1904.

Grawitz. Ueber eine akut eingetretene tropho-neurotische Erkrankung einer ganzen untern Extremität. *Deutsche medizinische Wochenschrift*, 1903, No. 27, p. 476.

Hertoghe. Trophoédème chronique. *Nouv. icon. de la Salpêtrière*, 1901, No. 12, p. 496.

Herz. *Wiener medizinische Presse*, No. 2 et seq.

Keppel and Vigoroux. *Annales medico-psychologiques*, xviii, 8th series, p. 281.

Kohn. *American Medicine*, December, 1901.

Lavastine. Société de neurologie de Paris, January 15, 1903, abstracted in the *Neurologisches Centralblatt*, 1903, p. 889.

Lannois. *Lyon médical*, April 10, 1904.

Lannois and Lancon, Jr. *Jour. des praticiens*, December 31, 1904.

Meige. Sur le trophoédème, *Nouv. icon. de la Salpêtrière*, 1901, No. 6, p. 465.

Mendel. Das acute circumscripste Oedem. *Berliner klinische Wochenschrift*, 1902, No. 48.

Morris. Angioneurotic Œdema. Report of two cases with the histology of a portion of the Gastric Mucosa obtained by the Stomach tube. *Journal of the American Medical Association*, November, 1904, p. 812.

Ibid. Final note on Case II, September, 1905.

Moyer. *Journal of Nervous and Mental Disease*, xxxi, p. 731.

Quincke and Gross. *Deutsche medizinische Wochenschrift*, January 1 and 7, 1904.

Raven. Angioneurotic Œdema of the tongue. *British Medical Journal*, 1901, ii, p. 1806.

Rolleston. Persistent Hereditary Œdema of the Lower Limbs, *Lancet*, September 20, 1902.

Rooney. A Case of Angioneurotic Œdema. *Albany Medical Annals*, xiii, p. 481, 1902.

Sainton and Voisin. Contribution à l'étude du trophoédème. *Nouv. icon. de la Salpêtrière*, 1904, No. 3, p. 189.

Sicard and Levastine. Trophoédème chronique acquis et progressif. *Nouv. icon. de la Salpêtrière*, 1903, No. 1, p. 30.

Smith. A Case of Wandering Œdema. *British Medical Journal*, 1901, i, p. 1403.

Straussler. Ueber einen Todesfall durch das sogenannte acute umschriebene Oedem. *Prager medizinische Wochenschrift*, 1903, No. 46.

Sudeck. Ueber die acute (trophoneurotische) Knochenatrophie mit Entzündungen und Traumen der Extremitäten. *Deutsche medizinische Wochenschrift*, 1902, No. 19, p. 336.

Sykes. A Vasomotor Neurosis in Varying Regions of the Same Patient. *British Medical Journal*, 1901, i, p. 707.

Ughetti. *Bolletín delle cliniche*, 1902, No. 12, p. 536.

Vervaeck. *Bulletin de l'Acad. royale de Belgique*, xvii, p. 545, 1903.

Wallace. *American Medicine*, April, 1905.

1002 WESTINGHOUSE BUILDING.

ON SPORADIC TRICHINOSIS.

By DAVID BOVAIRD, JR., M. D.,

NEW YORK.

HISTORICAL NOTE.—In 1835 Owen is said to have observed in human muscle the parasite which is now known as *Trichina spiralis*. In 1847 Joseph Leidy found the same parasite in the flesh of a hog. The relation of these two observations was not, however, recognized till in 1860 Zenker discovered that the presence of this parasite in man might produce serious or even fatal illness and that the disease was transmitted by eating the meat of infected hogs. Following this discovery the disease received careful and thorough study in Germany. The brilliant work of Zenker, Virchow, and Leuckart soon revealed the life history of the parasite, a story now familiar to us. In the decade immediately succeeding these discoveries extensive outbreaks of the disease were observed in Prussia and other European countries, and a great deal of interest was aroused in the subject. For a long time some men of science maintained that the parasites were harmless; others magnified the dangers of their presence in food of any kind and in some parts the dread of the new and repulsive disease created panic.

These discoveries and subsequent agitation served to bring the subject to the attention of medical men on this side. In 1864 Professor John C. Dalton, of this city, published a very clear account of the trichinæ with a report of several cases. In the same year Krombein reported in the *Buffalo Medical and Surgical Journal* an outbreak in a family with four fatal cases. From that year onward there are frequent reports on the subject and from all parts of the country. The outbreaks in this country have, however, been of very limited extent, insignificant as compared to such as that in the villages of Emmersleben, DUSDORF and NEUHAGEN, in Prussia, in 1883, (Stiles), in which 403 persons were affected and 66 died of the disease.

The American reports are usually of outbreaks in a single family. The most extensive that the writer has been able to discover are those reported by Persons, of Minnesota, in which 15 individuals were infected, and another of an epidemic in the town of Colrain, Massachusetts, involving 50 persons with 4 deaths. Stiles, in his exhaustive report on the subject (1901), estimates that since the original observations 900 cases have been reported in the United States.

When, in 1897, T. R. Brown, of Johns Hopkins, reported that the blood in these cases showed changes by which the nature of the disease was suggested, a new interest was given to the subject, and since that time observations on single cases or small groups of cases have been frequently reported. Osler has reported five cases from the Johns Hopkins Hospital. Blumer and Neumann reported an outbreak of nine cases in two families. It is evident that in this country the disease occurs chiefly in the sporadic type, a single case or two at a time. It is also evident that such cases cannot be infrequent and that the more accurate methods of diagnosis will

bring to our knowledge increasing numbers of cases. These facts having been brought home by the discovery of five cases in the Presbyterian Hospital during the past five months, we are led to report observations on ten cases with the purpose of again calling attention to the subject, especially the more important points in diagnosis.

For the sake of clearness, Stiles' brief account of the life history of the parasite is here given:

LIFE HISTORY OF THE PARASITE.—A general idea of the life history of the parasite is necessary to a proper understanding of the source of infection, more particularly since certain erroneous ideas upon this subject have gained more or less credence. Briefly stated, the essential points to be held in mind are as follows: Three stages of the parasite are to be distinguished, namely, the embryo, the encysted larva, and the adult. The encysted larval stage has been encountered in the meat (muscles) of about 25 different mammals; it occurs most frequently in omnivorous and carnivorous mammals (man, hogs, rats, mice, cats, bears, etc.), and is found in the normally nonmeat eating animals (cattle, hares, rabbits, gophers, etc.) only (a) when trichinous meat has been fed to them purposely, (b) when from lack of other food these animals eat meat which happens to be trichinous, or (c) when they happen to eat a piece of trichinous meat accidentally. From present scientific data trichinæ may live in practically any mammal, but only the meat eating mammals are at all likely to be found infected.

Trichinæ do not occur in any stage in any birds, reptiles, amphibia (frogs), fish, or invertebrates (insects, snails, etc.), except in isolated cases where certain of these animals are subjected to infection under abnormal conditions in laboratories.

Since the encysted larva is the infecting stage, it will be seen that it is not necessary to take into consideration, from a point of public hygiene, any animals except the omnivorous and carnivorous, and from the practical standpoint the only ones, with isolated exceptions, which need be considered are man, hogs, rats and dogs.

When any one of these animals eats any other one of them or one of its own kind (when a man eats pork, or a hog or dog eats a rat, for instance, or when a hog is fed on the offal of another hog) and the animal eaten happens to be trichinous, the conditions for infection, unless they have been guarded against, are present. If a hog eats a rat which is infected with live encysted larvæ, the latter escape from their capsule, become adults within a few days, and multiply in the intestinal tract of the hog. Numerous embryos, which are born of the adults, wander to the muscles of the hog, where they develop into larvæ and become encysted. If now the hog is slaughtered and the meat eaten by a man without proper precautions (cooking or curing), the man in turn becomes infected.

The clinical data of our ten cases follow. In every instance the clinical notes have been condensed as much as possible, especially in the matter of the physical examination, only the essential facts being given:

CASE I.—G. H.; patient is a German, 32 years of age, married, an upholsterer by trade. He was admitted November 13, 1892, and died November 19, 1892. The history is irrelevant until his eating of pork on October 23, 1892, with family. There were no symptoms till ten days later, when a feeling of exhaustion appeared, then loss of appetite. A few days later pain appeared in the muscles of the legs and the arms on motion. Then the muscles became tender and pain increased until one week before admission walking became intolerable, the muscles chiefly affected be-

ing those of the calf, the thigh, the upper arm, the pectoral, and gluteal regions. With the beginning of symptoms he also had œdema of eyelids and face. Two weeks before admission he had diarrhœa, five stools daily, thin, watery, yellow. The urine was normal.

Examination. The tongue is dry, red and fissured. There is some slight œdema of the extremities and a well marked, general muscular tenderness, especially in the regions of biceps and quadriceps. Patellar reflexes are absent.

During his six days' stay in the hospital the temperature ranged from normal to 103.8° being low toward the end. The striking symptoms were thirst, profuse perspiration, great exhaustion. He became very weak, mildly delirious and died of exhaustion. The notes of the autopsy follow:

Anatomical diagnosis: Trichiniasis, chronic endocarditis, infarction of lung, acute pleurisy, fatty liver.

General: Frame, medium size. Muscular development poor. Adipose scant. Diaphragm on right side fourth rib, left side fourth space. Surface normal.

Heart: Pericardium contains 1,000 c.c. clear serum. Very slight old vegetations on mitral valve; other valves normal. Muscle normal. Weight, 10½ ounces.

Lungs: Left, no adhesions, no fluid in pleura, congestion and œdema. Weight, 16 ounces. Right, pleura contains a few ounces of turbid serum. No adhesions. Slight fibrinous exudation. Slight cicatrices at apex. Congestion and œdema. Hæmorrhagic spot in lower and anterior corner of lower lobe. (An infarction.) Weight, 22 ounces.

Gallbladder: Contains a little yellow brown watery fluid.

Liver: Surface, smooth. Very fatty. Weight, 68 ounces.

Spleen: Normal. Weight, 6 ounces.

Pancreas: Normal. Weight, 2½ ounces.

Kidneys: Left, ureter and suprarenal normal. Capsule free. Surface smooth except for a few old adhesions. On section a little congested. Weight, 5 ounces. Right, same. Weight, 5½ ounces.

Bladder: Just outside bladder to left and behind, imbedded in connective tissue, is a rounded nodule 1.5 inch in diameter. On section shows gelatinous material.

Brain: Brain and membranes considerably congested; otherwise normal.

Stomach: Much mucus. Congested. Three inches from pylorus along lesser curvature is a flat ulcer 1 inch in diameter.

Intestines: Solitary follicles very prominent. Some spots of congestion.

CASE II.—K. H.; patient, a German housewife, is 28 years of age, wife of patient of Case I. She was admitted on November 13, 1892, and discharged as cured February 24, 1893. The history until present illness is excellent. On October 23rd her husband, her eldest son and herself all ate freely of sandwiches made of freshly chopped pork and beef. During the following week she suffered from abdominal pains, nausea and vomiting, but no diarrhœa. At the end of about ten days, she first noted puffiness and œdema of the upper eyelids, which soon extended to the entire face. Pains now began to develop in the muscles of arms, back, and legs in order named, becoming more and more intense until admission to the hospital, just three weeks after eating the meat. In the last few days she has perspired profusely, and has complained of some pain in the masseter muscles. The two members of the family who ate no sandwiches are well. On admission the temperature was 101.3, pulse 132, respiration 36, the urine normal.

Examination. Patient is pale and apathetic. Covering chest, abdomen and especially the back and but-

tocks, there is a papular eruption, erythematous in places. There is considerable œdema in all the muscular tissues, especially in the lower extremities, and great tenderness over the entire body especially marked in the calves of the legs, the thighs, deltoid and pectoral regions. Tache cerebral is marked. The abdominal reflexes are lost, and patellar reflexes diminished.

The fever gradually fell during the first two weeks, then rose again and touched 102° for two days, then fell to normal about end of the fourth week. The symptoms gradually abated and at the end of three weeks there was a marked improvement, the patient being able to move her legs. At the end of two months she was able to walk, but anæmia was marked. Hæmoglobin was 66 per cent. at the end of two months. The convalescence was gradual.

CASE III.—A boy, 7 years of age, the son of preceding patients. He was admitted to the hospital November 3, 1892, and discharged on March 6, 1903. He ate raw pork with parents on October 23rd. At the end of ten days he began to complain of pain in muscles of arms, legs and abdomen. A mild general anasarca developed. The respiration became rapid and muscular tenderness more marked until admission to the hospital.

Examination. The child is drowsy, and has œdema of the eyelids. He shows typhoid appearance, the superficial veins of abdomen are prominent. Over chest and back are some elevated reddened patches. The abdomen is somewhat distended and tympanitic, and the extremities are slightly œdematous. The muscles of thighs, legs and arms are tender to pressure.

During the first week there was little change in his condition, temperature ranging from 100° to 101°; pulse 108° to 120°; respiration 40. The œdema and other symptoms continued. In the second week the mental condition improved; he developed a diarrhœa, which continued for ten days. During the third week he developed a number of abscesses on the head and back, each containing about 2 drachms of pus. The examination of the pus for trichinæ resulted negatively. At the end of two months he was convalescent, which convalescence was interrupted only by an attack of tonsillitis.

CASE IV.—L. D., a German, 24 years of age, mason and brewer. He was admitted April 2, 1895, and died April 13, 1895. The family history is negative, while previous history shows typhoid fever ten years ago. He drinks eight glasses of beer daily, and eats pork moderately.

The present illness began two weeks ago when he thinks he caught cold. It began with fever, some vomiting and diarrhœa, five or six movements daily for a week. There was no epistaxis, chills, nor cramps. His legs have become weak, and for the past five or six days his legs and body have been very tender. He complains of exquisite tenderness in the extremities, muscles of chest and abdomen. The temperature was 105°; pulse 106; respiration 42. The specific gravity of the urine was 1.025, with a trace of albumin, and casts.

Examination. There is dullness over right lower lobe, with harsh respiration and intensified voice, hyperæsthesia and tenderness in chest, thighs, calves, arms and forearms. Perspiration is profuse.

The temperature continued irregularly high, 100.5° to 105°; the pulse grew weaker; and the respiration varied considerably, 24 to 44. He developed signs of consolidation over both lower lobes behind. At the end of a week he had diarrhœa. On April 12th he was aspirated and 26 ounces of clear fluid obtained from the left chest. On April 13th, with a rising temperature, the sputum became blood tinged, he became cyanosed, passed into coma and died.

The examination of the urine during his illness showed the following: 1,025-1,028 specific gravity, no albumin; granular casts at times.

The autopsy findings follow:

Anatomical Diagnosis: Pleurisy with effusion; infarction of lung; nephritis, trichiniasis.

General: Frame, medium size; adipose scant; muscle fair. Diaphragm on right side fourth rib, left side fourth space.

Heart: Pericardium normal. Heart normal. Weight, 9½ ounces.

Lungs: Left, pleura covered with fibrin. Moderate quantity of serum in cavity. A thrombosis of branches of the pulmonary artery supplying lower lobe. Also hæmorrhagic infarction of the lower lobe. Weight, 18 ounces. Right, congested. Weight, 22 ounces.

Gallbladder: Full of thick, black bile.

Liver: Consistence normal. Surface smooth. Section rather pale. Weight, 71 ounces.

Spleen: Consistence rather soft. Surface and section normal. Weight, 9 ounces.

Pancreas: Normal.

Kidneys: Left, adrenal normal. Ureter normal. Capsule free. Consistence normal. Surface smooth in places. Minute hæmorrhagic spots. Section pale in places, some little degeneration in places. Cortex rather thicker than usual. Weight, 6 ounces. Right, same. Weight, 5 ounces.

Stomach: Normal.

Intestines: Normal.

Brain: Normal.

CASE V.—M. L.; patient is male, single, 24 years of

times he has been nauseated, but he has not vomited. He has been constipated. For five days he has been in bed because of weakness and pain, with marked sweating at night. He has eaten no sausages or ham in two months, but has had pork chops (cooked) twice a week.

Physical examination is negative except for some tenderness to deep pressure in the right lumbar region and in both biceps. The urine is normal. The temperature on admission is 102°, pulse 104, respiration 20.

Typhoid was suspected and appropriate regimen was ordered. For one week the patient had a very irregular temperature, varying from 97° to 102°. The sensitiveness in the lumbar region continued for a time, then disappeared. After the first week the patient made steady progress, except for an attack of tonsillitis. The history is told in the blood examinations. (See Table I.)

TABLE I.—BLOOD EXAMINATIONS OF PATIENT OF CASE V.

	Dec. 16.	Dec. 18.	Dec. 19.	Dec. 28.	Dec. 30.	Jan. 6.
Red blood corpuscles	4,136,000	.....
Hæmoglobin
Index
Differential count	400	400	.....	500
Polynuclear	66.5	62.0	.....	75
Large mononuclear	3.0	15.0	.....	8.6
Small mononuclear	4.8	6.0	.....	7.7
Eosinophiles	25.7	16.2	.....	8.7
Basophiles	0.8	.....	.....
Myelocytes
Leucocytes	24,500	28,400	23,250	100.0	100.0	100.0
Widal reaction	is negative.					

CASE VI.—Female patient, 18 years of age, from Bohemia. Domestic. Patient was admitted July 3,

TABLE II.—BLOOD EXAMINATIONS OF PATIENT OF CASE VI.

Date	July 4 and 5.	July 7.	July 9.	July 11.	July 14.	July 18.	July 21.	July 25.	July 27.	July 29.	July 30.
Red blood corpuscles	.....	4,084,000	.....	.....	.....	4,792,000	.....	.....	.....	.....	4,368,000
Hæmoglobin	.....	80	.....	.....	.....	55	.....	.....	.....	.....	65
Index	.....	1	.....	.....	.....	0.46	.....	.....	.....	.....	0.75
Differential count	250	200	300	200	300	300	400	400	400	400	600
Polynuclear	74	71.6	71.0	77	80.6	70.7	58.2	53.2	40.2	30.5	35.0
Large mononuclear	5.2	5	9.0	7.5	10.7	16.6	20.2	14.0	19.7	20.0	19.6
Small mononuclear	5.6	3	5.0	10.5	3.3	4.3	5.2	7.5	10.0	6.0	4.7
Eosinophiles	14.8	20.3	15.0	5.0	5.3	5.3	15.7	25.0	30.0	43.0	40.6
Basophiles	0.4	.....	.....	.....	.....	.....	0.5	0.2	.....	.....	.....
Leucocytes	20,300	6,200	8,100	6,000	8,000	10,800	6,600	16,000	19,500	11,100	12,700
Date	Aug. 1.	Aug. 3.	Aug. 5.	Aug. 7.	Aug. 8.	Aug. 10.	Aug. 11.	Aug. 12.	Aug. 13.	Aug. 14.	Aug. 15.
Red blood corpuscles	.....	.....	.....	4,392,000	.....	.....	.....	.....	.....	.....	.....
Hæmoglobin	.....	.....	.....	65	.....	.....	.....	.....	.....	.....	.....
Index	.....	.....	.....	0.75	.....	.....	.....	.....	.....	.....	.....
Differential count	500	450	500	500	500	500	500	500	500	500	500
Polynuclear	32	28.4	30	19.2	24.0	22.6	22.0	25.0	31.8	27.0	43.0
Large mononuclear	22.4	19.7	15	18.4	8.4	13.2	13.4	8.2	8.0	14.8	3.8
Small mononuclear	6	5.3	7.4	10.8	10.0	14.8	12.0	18.6	10.2	15.6	7.6
Eosinophiles	39.6	46.3	47.4	51.2	57.2	48.6	52.4	48.0	49.2	42.0	45.4
Basophiles	.....	.....	0.2	0.4	0.2	0.8	0.2	0.2	0.8	0.6	0.2
Leucocytes	13,600	16,200	18,000	13,100	14,400	16,050	.....	13,900	22,000	13,100	11,900

age, born in Ireland. Valet. He was admitted December 14, 1899, and discharged January 13, 1900. The family history is irrelevant. He is accustomed to eat ham and pork, but not in large quantities and always fairly well cooked. Before coming to this country, two years ago, he used to eat pork freely, but always well cooked.

Previous history.—About four years ago he remembers having a sudden attack of diarrhœa and vomiting of greenish fluid with severe abdominal pain which lasted several hours. Since then he has often had sharp pain in his muscles, especially across the back and upper arms. These pains would always disappear on exercise.

Present illness.—For three or four months the patient has not been feeling well. He has had attacks of headache and vomiting and general malaise and nervousness. The week before admission he began to have sharp pains in his arms and back, and for the first time the painful areas were very tender. He also noted a swelling below his eyes and at times dimness of vision. For a week he has been short of breath on going upstairs, and has had a feeling of constriction in the chest anteriorly. His appetite has been very poor, and at

1903, and discharged cured August 17, 1903. The family and previous history is irrelevant. She is accustomed to eat sausages often, not always cooked.

Present history.—Six days ago she went to a picnic. Next morning she felt a little malaise, which condition has increased. Four days ago her face was red and she had some redness of eyes and photophobia. Three days ago the eyes were worse and she had headache. For two days she has been constipated and had pains in the back and legs. On day of admission her temperature in the morning was 103°, the face was less red. There was no vomiting, no chill, no epistaxis. The patient complained of weakness and headache, was irritable and excited. Her friends thought her delirious. On admission she had passed no urine for twenty-four hours, she was catheterized and 8 ounces were obtained, containing mucus, but no albumin. Her temperature was 105.8°, pulse 135, respiration 38.

The physical examination.—Patient is restless, irritable, and irrational, the conjunctivæ are congested, while the eyelids and face are puffy, œdematous, red, in marked contrast to the nose, which is pale. There is a sense of induration over reddened areas, some tenderness over lower half of abdomen, and slight cyano-

sis of finger tips. Feet and ankles are slightly œdematous. The muscles of neck, chest, and extremities are exquisitely sensitive. The reflexes are normal. On July 5th, the face seems a little less swollen and congestion of conjunctivæ less, but the patient is still irritable, has a slight dry cough with a few sibilant râles over both chests. The temperature is lower, and she perspires freely. The muscular sensitiveness is most marked over insertion of muscles at elbows and knees. On July 6th, eosinophilia of 14 per cent. is found. On July 7th, improvement commences to be gradual with less fever, less œdema, less tenderness, but the constipation is severe. On the 9th, the general condition is better, pains and tenderness are less and are marked only about left knee. On the 16th, the œdema of the face is gone, no more tenderness is present. Sections of a muscle show trichinæ. On August 8th convalescence is normal. (See Table II.)

CASE VII.—Female, age 26 years, single. Born in the United States. Clerk. She was admitted December 30, 1903, and discharged March 8, 1904. The family history and previous personal history are negative.

Present illness.—About two weeks before admission she ate some poorly cooked pork. Three days later she had some pain in ankle, which disappeared. Ten days after eating pork her eyelids began to swell, swelling accompanied by pain. Later there was pain in neck, knee, and legs, and then in chest and back,

CASE VIII.—Male patient, 21 years of age, single, laborer, born in Italy. He is admitted July 11, 1905, and discharged August 19, 1905. The family history is negative, while the previous personal history shows that he was always well except for malaria six days ago. No history of eating of pork in any form.

Present history.—Six days ago patient fell and struck his left ear on a beam. Next day his eyelids began to swell. He was weak and tired, but he kept at work for three days, and thinks he had no fever. The bowels were regular, but he had no appetite. Yesterday the patient was much worse, his eyes pained him, although not more swollen. He had a high fever and vomited once. Three days ago he stopped work and went to bed, because he felt so weak. He had no epistaxis, abdominal pain, or diarrhœa. His chief complaints were weakness and fever.

Physical examination.—Patient is a well nourished, muscular man, moderately prostrated and looking sick. The tongue is inclined to dryness and moderately coated with a whitish fur; the papillæ are prominent. The pharynx and the tonsils are congested, while the eyelids are swollen, and the conjunctivæ are congested. All the superficial glands are palpable. Heart: A soft blowing systolic murmur can be heard at apex; also over pulmonic area, otherwise it is normal. The pulse is regular, a little rapid, forcible, of good size, the wall of the artery is palpable. Lungs and liver are normal, but the spleen shows dulness to the costal margin and

TABLE III.—BLOOD COUNTS OF PATIENT OF CASE VII

Date.	Dec. 31.	Jan. 5.	Jan. 11.	Jan. 14.	Jan. 18.	Jan. 23.	Feb. 1.	Feb. 10.	Feb. 19.	Feb. 27.
Red blood corpuscles.....	3,100,000	14,200	18,260	...	...	13,000	...	...	...	...
Whites.....	16,100	727	68	...	...	...	...	...	...	...
Hæmoglobin.....	250	250	250	...	250	300	300	250	300	300
Differential count.....	11.8	41.6	32.8	35.6	37.2	39.4	44.3	50.4	34.0	17.6
Polynuclear.....	11.2	9.6	14.4	15.6	6.4	14.0	16.0	12.0	18.3	18.7
Large mononuclear.....	12.4	12.8	14.8	20.4	13.2	20.3	21.7	16.4	27.3	17.7
Small mononuclear.....	31.2	35.2	38.0	28.0	36.0	25.0	16.3	20.6	19.4	15.3
Eosinophiles.....	0.4	0.8	...	0.4	1.2	1.3	1.7	0.8	1.0	3.0
Basophiles.....	...	...	...	...	...	...	...	0.4	...	0.3
Myelocytes.....	...	...	...	...	...	...	...	...	...	...

but no digestive disturbance. She had no sensation of fever, but the temperature was 103° on admission.

Physical examination.—The face beneath eyes is red and puffy, the conjunctivæ are injected. There is an occasional subcrepitantr r le at the bases of lungs. Some swelling of the dorsum of the hands and the fingers, especially of left hand, are present. The patient has considerable pain and tenderness in muscles of the left arm and leg, especially in the calves and tendons about the knee, while her neck is stiff and tender, especially on left, and some tenderness over erector spinæ.

January 7, 1904. Patient has suffered much from headache, wakefulness, pain, and tenderness of muscles, especially in the left arm, leg, and neck. There is very little swelling of the face. Eosinophiles 35.2 per cent. January 14th. Patient continues to be very uncomfortable, the left arm and right leg are seats of most pain, but there is no swelling of face. She does not sleep well. Eosinophiles 28 per cent. January 21st. Patient still has much headache and pain in the muscles, the joints of left hand are stiff and moderately swollen. Eosinophiles 36 per cent. February 8th. Her condition is improved. She is up and about, but walks very stiffly and with pain, the ankles swell during the day. Her left hand is stiff and painful. Eosinophiles 16.3 per cent. March 8th. Slow convalescence commences, but there is considerable muscular soreness, especially on walking, and the left hand is particularly uncomfortable. The urine is normal; the temperature falls steadily, but very slowly, ranging from 98.6 to 101° for a month, but is normal for the second month. The long duration of the muscular pains and the slow convalescence were notable. (See Table III.)

the edge is just palpable. The abdomen is normal. The extremities show normal plantar reflexes; knee jerks are not obtainable on account of rigidity. The skin over the chest, abdomen, and back shows a good many small red spots, fairly typical enteric. On admission the temperature was 104°, pulse 108, respiration 26.

July 14th. Temperature varying widely. The spots are fading. The tongue lightly coated, and the spleen palpable. Patient feels perfectly well. July 17th. The temperature varies three degrees a day. The eruption has disappeared, and the spleen is not palpable. July 21st. The temperature shows lower tendency, reached only 101.7° yesterday. The œdema of the eyes has disappeared. Patient has no pain and feels well. July 26th. The temperature is below 100°. Patient is feeling better, the tongue is clean, and the spleen not palpable. On the small of the back and the buttocks are a number of pustules. July 28th. Small abscesses on back were incised, and again on July 31st. On July 29th a small portion of the right biceps was removed for examination for trichinæ, which showed an interstitial myositis, but no trichinæ. A second muscle preparation from the pectoral showed the same myositis and a few trichinæ. From August 19th, patient made a rapid convalescence, marked only by one chill, the origin of which was not found. The urine has a specific gravity of 1.010 to 1.025, with occasional trace of albumin and granular casts. (See Table IV.)

CASE IX.—Laborer, 24 years of age, born in Italy. He was admitted August 24, 1905, and discharged September 21, 1905. The family history is irrelevant, while the previous personal history shows that patient had always been well and strong until he came to this country. Three months ago he had some trouble with

his digestion. He had diarrhoea which lasted several weeks. Two weeks ago the middle finger of his right hand became infected, and was opened in the Accident Ward. It has been steadily improving. There is no history regarding the eating of pork or sausage.

Present trouble.—One week before admission the patient began to feel tired and weak and complained of headache. For four days he has had slight fever. He has also had a slight cough with mucous expectoration. Yesterday his bowels were loose. He has grown gradually worse, the pains became general and the fever higher. He has not been in bed. His chief com-

ON RETROANTEROGRADE AMNESIA, WITH REPORT OF A CASE.*

By ALFRED GORDON, M. D.,

PHILADELPHIA,

CHIEF OF THE NEUROLOGICAL CLINIC, JEFFERSON MEDICAL
COLLEGE; EXAMINER OF THE INSANE AT PHILADEL-
PHIA GENERAL HOSPITAL, ETC.

Among the various symptoms of mental disturb-
ances, amnesia is a very interesting and important

TABLE IV. BLOOD EXAMINATIONS (GAMGIBONAL) OF PATIENT OF CASE VIII.

	July 11.	July 18.	July 22.	July 25.	Aug. 5.	Aug. 11.	Aug. 17.
Hæmoglobin	83%	Normal.	.....	.....	94%	.....	.....
Red blood cells	.....	.....	.....	.....	.....	.....	.....
Color index	.....	.....	.....	.....	.....	.....	.....
Leucocytes	7,900	.....	11,000	.....	16,000	11,000	10,100
Differential count	.....	400	.....	300	300	300	300
Polynuclears	.....	61.3	.....	58.6	52.0	60	61.0
Large mononuclears	.....	4.2	.....	5.0	6.0	5	9.0
Lymphocytes	.....	9.4	.....	17.0	17.0	12	16.0
Transitionals	.....	1.4	.....	0.7	6.0	45	1.5
Eosinophiles	.....	23.2	.....	18.7	18.5	18	12.0
Basophiles	.....	0.3	.....	.....	0.5	.....	0.5
Widal reaction	Negative.	Negative.	Negative.	.....	.....	.....	.....
Malarial reaction	.....	Negative.	.....	.....	.....	.....	.....
ORGANISMS	.....	.....	.....	.....	.....	.....	.....

plaints are: Fever, headache, pains in the legs and back.

Physical examination.—Patient is a well nourished man, who is prostrated, apathetic, and looks sick. The tongue is moist, coated with whitish fur, and indented by teeth, the pharynx and tonsils are congested, and coated with adherent mucus. A slight puffiness is noted about the eyes. The conjunctivæ are congested. The superficial glands, submaxillary, cervical, axillary, and inguinal glands are palpable. The heart and lungs are normal. There is liver dullness in anterior axillary line from fourth rib to seventh space, but the

one. In some cases amnesia is only a secondary or an accessory symptom without any special diagnostic or prognostic value. In others it is the chief symptom or one of the principal manifestations of a given malady.

There are many affections in which the memory may be more or less affected, but a true and genuine amnesia is met with in paresis, epilepsy, confusion and traumatism. There are, however, cases with a congenitally weak memory, but this cannot be considered as a true amnesia; here there is rather ab-

TABLE V. RESULTS OF BLOOD EXAMINATIONS (CELLI) OF PATIENT OF CASE IX.

	Aug. 24.	Aug. 25.	Aug. 26.	Aug. 29.	Aug. 30.	Sept. 1.	Sept. 8.	Sept. 12.	Sept. 15.
Hæmoglobin	78%	No malaria.	.....	.....	.....	.....	.....	.....	.....
Red blood cells
Color index
White cells	11,000	.....	11,700	12,700	28,100	11,800	12,500	9,000	8,000
Differential count
Polynuclears	80	75.0	72.0	56.0	60	68.0	58.0
Large mononuclears	2.5	3.0	6.5	1.5	6	2.5	6.0
Lymphocytes	3.5	10.0	7.5	9.0	8	10.5	13.5
Eosinophiles	7.0	10.0	13.0	31.0	24	14.5	14.0
Basophiles	0.5	0.5	.....	.....	0.5	1.5	0.5
Transitionals	6.5	1.5	1.0	2.5	1.5	3.0	8.0

edge is not palpable. The spleen shows a little enlarged dullness; the edge is not felt. The abdomen and extremities are normal. The temperature is 102°, pulse 84, respiration 20, on admission.

August 29th. The temperature has ranged from 102° to 103.5° for four days; for the past two days it has been lower. Two days ago the terminal phalanx of the infected finger was found necrotic and was removed. The wound is clean and there are no signs of extension of the inflammation. There have been several tender points along the spinal muscles. September 1st. The wound is clear; the temperature is normal. There has been no more tenderness in the muscles. September 4th. The patient is well, but owing to the eosinophilia a section is taken from the lumbar muscles for examination. This is found to contain many encapsulated trichinæ. September 21st. The patient made a steady convalescence without further symptoms. The urine was practically normal throughout stay. (See Table V.)

(To be concluded.)

Headache Due to Otitis Media.—Repeated headaches may be due to the unsuspected presence of otitis media, with or without mastoiditis.—*American Journal of Surgery.*

sence than loss of memory. In reality the term amnesia is applied in practice only to a diminution or acquired loss of memory. In the latter case various degrees may be present; either absolute destruction of images or simply weakening of the same images. In organic aphasia, for example, the memory images disappear with the centres in which they are localized. In hysterical mutism in which there is only a dynamic or functional disturbance there is no loss, but only an inability to reproduce the same images.

There are therefore two classes of amnesias: functional and organic. The characteristic feature of the organic amnesia consists of its permanency and progressive evolution. Here by virtue of an organic alteration of nervous elements the memory for recent events is first affected, as new impressions can no more be associated and preserved. Then gradually old intellectual acquisitions become effaced.

Functional amnesia presents by far more varia-

* Read and patient exhibited before the Philadelphia Neurological Society, January 23, 1906.

tions than organic. It may be systematized when remembrance of a certain group of ideas concerning one subject or one person is lost. It may be general (rare, however), in which the person thus affected has completely lost the memory for all past events of his life and like an infant must be taught to acquire new knowledge. An example of such a remarkable condition can be found in the history of the Rev. Hanna (Sidis and Goodhart). It may be partial. Examples of this variety can be found in cases of double personality (see A. Gordon's paper on Double Ego, *American Journal of the Medical Sciences*, 1906). It may be localized or temporary, when events of a certain period of life are forgotten. Localized amnesia may be simple when the principal fact alone is forgotten, as for example in cases of epilepsy, when the patient does not remember the attack. There are cases in which in addition to the principal event a period of time immediately preceding the latter is forgotten; this period may be more or less long. We speak then of retrograde amnesia. In other cases the memory for the period following the principal event is affected; this is an anterograde amnesia. Anterograde or retrograde amnesia may be met with individually, but in the majority of such cases the amnesia is anteroretrograde.

The subject of anteroretrograde amnesia, although mentioned in the literature as far back as 1826 (Koenig), was nevertheless emphasized first in France in 1881 by Azam in a case of traumatism and by Briand in a case of poisoning with carbon oxid. Charcot, Janet, Régis, Sollier, Wagner, Möbius, Strümpell, and many others have reported a number of observations. The pathogenesis of this peculiar involvement of the mnemonic faculties is still a matter of conjecture. The discussion in this respect between Möbius and Wagner is a too well known fact to dwell upon. A review of the cases reported in the literature will convince an impartial observer that Möbius' views, viz., that the anteroretrograde amnesia is purely a hysterical phenomenon cannot be accepted. While there are cases in which other hysterical manifestations may be present alongside of this form of amnesia, cases in which the hysterical nature of the amnesia is evident, as for example the famous case of Charcot, who removed the amnesia by hypnotism, there are others, in which there cannot be the slightest doubt about the nonhysterical nature of the phenomenon. The majority of the observations on the subject have reference to cases with a history of loss of consciousness. There are on record about forty cases of attempts at hanging. A large number of cases present a history of trauma with loss of consciousness, of chronic intoxications, particularly alcoholism, of epilepsy (Séglas), of eclampsia, of violent emotions. There is also one case reported by Ch. Féré (*Comptes rendus de la Société biologique*, 1897, p. 154) in which a retroactive amnesia developed after a great physical exertion; a young man of eighteen, after a long ride on a bicycle, slept fourteen hours; when he awoke he could not recall what occurred four hours prior to his sleep.

The nervous disturbances observed in hanging throw considerable light on the pathogenesis of the condition. Wollenberg (*Nietlebener Festschrift*, 1897), observed a patient with persecutory delu-

sions who hung himself, but was released before loss of consciousness set in; no peculiar symptom was noticed. At his second attempt he lost consciousness; when revived he presented amnesia. The author asks himself whether the loss of consciousness is not an indispensable condition for disturbance of memory. In the act of hanging there must be a circulatory disturbance in the brain following the compression of the carotid arteries; more or less marked cellular changes will be the consequence, a fact to which attention has been called by Wagner, Seydel, Régis, and Joffroy. In traumata of the cranium followed by loss of consciousness, the concussion of the brain may lead to an anteroretrograde amnesia. On the other hand a great many cases of traumatic neurosis, although followed by loss of consciousness, are nevertheless free from amnesia. Then again Näcke and Klink report cases of insignificant traumata with amnesia. It is therefore evident that there is no uniformity in the views on the pathogenesis of this form of amnesia, which, as before, remains obscure.

As to the question of return of memory the records show that there are several possibilities; it may return: (a) early, (b) late, (c) completely, (d) partially. The longest period reported in the literature was that of Alzheimer's case (*Allgemeine Zeitschrift für Psychiatrie* (xi. 4, p. 483), in which the amnesia lasted more than a year and a half; it was a case of epilepsy.

In conclusion I wish to emphasize this fact that in the anterograde amnesia Ribot's law of retrogression concerning memory is correct, the most recent events, viz., those that are most loosely attached to conscience disappear first, the new psychic processes die before the old ones. An analogy is found in the fact observed by Luhrman and others, namely: In mental cases with attempts at hanging there is a great amelioration or complete suppression of the delusions which existed previously; here the new personality created by the delusion is also less stable than the old and consequently disappears more easily under the influence of a nervous shock. The case I am about to report, although purely clinical, is nevertheless interesting, as it presents a clear example of anteroretrograde amnesia following a physical shock.

Captain E. R. P. met with an accident twelve weeks ago; he was knocked off a bicycle by a horse, the horse's head striking his own. At this juncture the patient was unconscious and remained so for twenty-four hours. He was cut about the external angle of the left eye, the nose was fractured and bleeding. No blood came from the ears. The conjunctivæ were markedly hæmorrhagic. At the end of twenty-four hours he vomited about a pint of dark clotted blood. He had control of the movements of both arms and legs, also of the bladder and bowels. After he regained consciousness, he was confused for a certain time. A careful examination showed no evidence of an organic disease; reflexes, station, gait, motor power, sensation, were all normal. Eye and ear examinations gave negative results.

From the moment he regained consciousness he was able to recognize his relatives and answered questions. He was very somnolent for a long time, would sleep all day and night except for a few minutes, when he was given medicine and liquid food. Awakened he would recognize everybody, talk rationally, then go to sleep again. Gradually the man improved, left his bed

and began to be interested in the surroundings. When told of the accident and of the manner in which it occurred, the patient could not recall a single incident. Moreover, the happenings during the week immediately preceding the accident were entirely forgotten by him. When he totally recovered from his physical injuries and was able to enjoy life, he could not recall his condition during the ten days following the accident. The general nervousness and the frontal headaches from which he suffered during the first two months have totally disappeared and he is now a well man. His memory is perfect for old and recent events, except for the occurrence of the accident, the week prior to and ten days following the accident. In spite of constant efforts to remind him of those periods of time, he is absolutely unable to recall a single fact concerning that period of his life. It is, therefore, a pure example of anterograde amnesia.

CASE II.—Mr. H. R., aged forty-seven, was kindly referred to me by Dr. J. E. Grube, of Punxsutawney, Pa., with the following history: In December, 1904, the patient went to sleep as usual and in order to heat the room in which his two little children also slept, he lit a gas radiator. While they were all asleep, in some way the light went out and the gas kept on accumulating in the room. On the following day one child was found dead, but some signs of life was noticed in the other child and in the patient. The latter remained unconscious for thirty-six hours. He responded to treatment very slowly and for six weeks his condition was that of stupor with occasional lucid intervals. Since then it was difficult for him to resume his usual occupation of bartender.

Upon examination I found the patient emotional, as he cried easily. Although he answered every question, this was nevertheless done with a marked delay. He made the impression of a neurasthenic individual: complained of fatigue, of being irritable. The main disturbance concerned his memory. He had no recollection of the occurrence in December, 1904, did not remember that the two children slept in his room at that time. He lost all remembrance of events prior to the intoxication with carbonic acid gas. The amnesia for this period covered an indefinite time. As to the period following the accident, it also extended for several months. It was, therefore, a case of retroanterograde amnesia. The disturbance of the mnemonic faculties in general was more extensive than in ordinary cases. A close questioning revealed that the amnesia affected also other events. He did not know the exact age of his children, and had only a faint recollection of the child that died during the asphyxiation. He had no recollection of Dr. Grube attending the other living child who was very ill for a long time, and could not recall the extent and the duration of her illness. He could not tell the whereabouts of his wife at the time of the accident, nor could he remember the names of some friends with whom he worked for a number of years. Remembrance of recent events was markedly affected, as for example, he could not tell where and how he spent the evening before he came with Dr. Grube to Philadelphia, and did not recall what he had for his meal only a few hours prior. The memory was so much affected for some facts that he could not hold the position to which he returned some months after the accident.

The physical examination reveals nothing abnormal. There are no hysterical stigmata. The patient is of sound mind, his orientation is good.

The present case differs from the recorded cases of retroanterograde amnesia in that the mnemonic faculties are disturbed to a far larger extent than ordinarily.

NORTHEAST CORNER OF ELEVENTH AND PINE STREETS.

A CONTRIBUTION TO THE STUDY OF PSEUDONEURITIS OPTICA.

By MAX TALMEY, M. D.,

NEW YORK,

OPHTHALMOLOGIST AND AURIST TO THE METROPOLITAN HOSPITAL AND DISPENSARY.

Examination of the fundus of the eye sometimes reveals a picture so much like that of optic neuritis, that the ophthalmoscopic picture in itself would indicate such a diagnosis. Careful consideration of the other factors of the case, however, excludes inflammation of the optic nerve and compels the assumption of a pseudoneuritis optica.

Reviewing the literature on this subject I failed to find the expressions pseudoneuritis optica, pseudopapillitis, spurious optic neuritis indexed in any medical dictionary or encyclopedia. Furthermore, leading textbooks on ophthalmology either do not mention it at all or only very superficially, with the exception of de Schweinitz. The latter describes in detail a distinct appearance of the papilla optica, called "hyperopic disc," or "spurious optic neuritis," and also states that it is not of infrequent occurrence.

The ophthalmoscopic picture of pseudoneuritis optica presents in the main the most striking features of true neuritis. Thus, the surface of the disc appears hyperæmic, injected; the color, instead of the normal delicate pink, is deeply red, dark or greyish red, or of a "brick dust" hue. The borders of the disc, normally well defined, are either not discernible at all or only faintly in a very small part of the circumference. The surface area of the papilla appears increased in size, and there are sometimes no other signs by which to locate it except the confluence of the blood vessels or a color a shade different from that of the rest of the fundus, the general red color of the latter merging gradually into the differently shaded red of the papilla. The disc seems to protrude forwards, its surface being more prominent than the surrounding retina and having a smaller refraction. The calibre of the blood vessels is unusually wide, and the veins are tortuous. The perivascular lymph sheaths are very conspicuous, forming, especially near the confluence, broad whitish streaks along the vessels. The tissue of the papilla shows here and there turbid areas which may cover a blood vessel and hide it partly from view. Fine striations are also often visible, radiating from the papilla over its obscured margins into the neighboring retina.

Pseudoneuritis optica thus exhibiting the chief ophthalmoscopic features of true neuritis, the consideration of other points becomes necessary for a differential diagnosis. Returning to the ophthalmoscopic picture we find that the intensity of the symptoms will sometimes be of aid. While, for instance, a small or medium prominence of the papilla may be found in pseudoneuritis as well as in neuritis, a high elevation of its surface is only observed in neuritis. The same can be said of the turbidity or haziness of the papillary tissue. Circumscribed or diffuse hæmorrhages are pathognomonic of neuritis. In other instances the diagnosis can only be established by several examinations repeated at long intervals. In pseudoneuritis the aspect of the fundus

remains the same, while in neuritis a subsequent examination will not fail to reveal significant changes.

The functional condition as determined by a single examination is not always reliable for a differential diagnosis, for weak sight may be present in pseudoneuritis, and good vision in neuritis. The field of vision is not affected in pseudoneuritis, but may also be unaffected in neuritis. The pupillary reactions exist in both and are absent in neuritis, when the latter is associated with blindness. As in the ophthalmoscopic picture so here also, i. e., the functioning power, the constancy of the symptoms may determine the diagnosis. For long standing neuritis without marked changes of the functional ability is extremely rare, while in pseudoneuritis no alterations occur.

The presence or absence of the usual causes of neuritis, as lues or cerebral diseases, will further help to establish the diagnosis.

Pseudoneuritis optica is congenital. It is so frequently accompanied by hypermetropia, that it has also been termed "hyperopic disc." This identification of pseudoneuritis with hyperopic discs, however, does not seem to be justified. For very pronounced spurious optic neuritis is also found in emmetropia, e. g., the case of Holmes Spicer. Harlan found pseudoneuritis also in myopia. Furthermore the degree of the hypermetropia bears no relation to the ophthalmoscopic picture, a slight hypermetropia may coexist with strongly pronounced pseudoneuritis, and inversely. Therefore no direct causal relation can be held to exist between hypermetropia and pseudoneuritis (B. Nottbeck).

The visual acuity and pseudoneuritis are not interdependent. Normal vision may be associated with pronounced pseudoneuritis, on the other hand amblyopia may be met with in slight pseudoneuritis (B. Nottbeck).

Among the cases of pseudoneuritis optica observed by the writer the following affords a typical illustration of the subject.

Mr. M. consulted the writer on March 17, 1905, giving the following history: He is 38 years old, has been married for the last eight years, and is cloth examiner by occupation. One of his children died four days after birth, two are living and healthy. He denies lues, his wife never had a miscarriage. For years he "felt a heaviness in his eyes and used to feel sleepy," and also suffered occasionally from headaches. Three years ago he began to experience difficulty in reading. The print "would disappear, and he would skip lines." He sought advice in an eye clinic, where he was subjected to protracted examinations, the chief of the clinic presenting him to many physicians as an interesting case. After two calls at this institution he was told to return a year later. All this frightened him a good deal. He shortly afterwards visited another ophthalmological hospital, where he was carefully questioned regarding syphilitic infection, and a bad prognosis given, blindness being anticipated within a year. Glasses were prescribed for him with but partial relief. Glasses—+2 D.—purchased somewhat later independent of skilled advice gave fair relief. Shortly before consulting the writer headaches and difficulty in reading reappeared.

Status Præsens.—Patient is dark complexioned. Externally the eyes appear normal. The ophthalmoscopic examination reveals the following picture: The papilla of the left eye is strikingly hyperæmic, dark red in color, of the "brick dust" hue. The borders are not discer-

nible, except downwards in a very small part of the circumference, where the papilla appears a little brighter. The calibre of the bloodvessels is considerably wider than normal. Two veins running downwards are very tortuous. The perivascular sheaths are very conspicuous, forming broad white glistening bands alongside of some vessels. The nerve head appears to protrude. Its refraction is about +3 D. The rest of the fundus shows nothing of note, it is quite dark, and its refraction is +2 D. On the right side the disc is even of a darker red hue than on the left. The border is faintly distinguishable on the temporal side over a very small arc of the circumference. Otherwise the same conditions prevail as in the left eye. The pupillary reactions and the fields of vision are normal. The subjective examination of vision and refraction gives the following result:

$$V. O. D. S. = \frac{20}{30} \text{ Hm. } 2.5 \text{ D. V. } \frac{18}{15}$$

I prescribed +2.5 D. for constant use, and +3.5 D. for reading. A second examination ten days later showed no ophthalmoscopic nor functional change. The patient felt comfortable with his new glasses, the subjective complaints having disappeared.

Although our case presents an ophthalmoscopic picture of neuritis, careful consideration of the differential diagnosis discussed above shows that we are dealing with a pseudoneuritis. There are no causes pointing to a neuritis. The complaints of the patient do not indicate a serious condition, they are merely those of asthenopia and presbyopia. The prominence of the papilla is medium, there are no hæmorrhages. The functioning power is normal, the vision even exceptionally good. From the history of the case we may infer that other examiners have considered it to be unusual. The present examinations by the writer taken as long as three years later affording no signs pathognomonic of previous neuritis admit of the conclusion that the condition observed by those examiners was but a pseudoneuritis. That some of them have given an unfavorable prognosis which was not fulfilled proves the importance of differentiating neuritis from pseudoneuritis optica.

Bibliography.

- Geo. C. Harlan, *Transactions of the American Ophthalmological Society*, 1884, p. 721.
H. C. Bristow, *Ophthalmic Review*, 1891, p. 321.
M. Gunn, *Transactions of the Ophthalmological Society of the United Kingdom*, January 31, 1895.
Arnfeld, *Ueber die Neuritis Hypermetropum*. Inaugural Dissertation, Würzburg, 1896.
Holmes Spicer, *British Medical Journal*, 1896, p. 1204.
B. Nottbeck, Ein Beitrag zur Kenntnis der congenitalen Pseudoneuritis optica, *Archiv f. Ophthalmologie*, 1897, p. 32.
De Schweinitz, *Diseases of the Eye*, p. 511.
62 WEST ONE HUNDRED AND TWENTY-SIXTH STREET.

X Ray Treatment in Court.—Dr. Eduard Lang and Dr. Guido Holzknecht, of Vienna, were sued for damages for injury caused by x ray treatment. The case was one of psoriasis, and for the defence it was maintained that the x rays were particularly efficacious in psoriasis, that the application was entirely justified, and that the symptoms were due to an accidental infection. —*Archives of the Röntgen Ray*.

THIS CASE I HAD EXAMINED. THE EYES HAVE BEEN EXAMINED SEPARATELY, AND THE SAME RESULT HAS BEEN OBTAINED. VISION WITHOUT CORRECTION IS $\frac{20}{30}$, THE REFRACTION IS MANIFEST HYPERMETROPIA OF 2.5 D., THE CORRECTION OF WHICH INCREASES THE VISION TO A LITTLE LESS THAN $\frac{20}{15}$.

GONOCOCCIC INFECTIONS, AND THE PHYSICIAN'S RESPONSIBILITY.*

By J. BAYARD CLARK, M. D.,

NEW YORK,

GENITOURINARY SURGEON TO BELLEVUE HOSPITAL OUT-
PATIENTS DEPARTMENT, ASSISTANT SURGEON,
TRINITY HOSPITAL.

This paper is offered chiefly as a statistical study of the more important lesions caused by the gonococcus, in the hope of giving a better idea of the extent of the disease, and without attempting to teach anything of its pathology, symptomatology, diagnosis, or treatment.

The belief that gonorrhœa and syphilis were but different expressions of a single disease held sway from our earliest knowledge of the existence of these diseases, 2,000 years before Christ, until the latter part of the eighteenth century, when Benjamin Bell, in 1782, brought forward his experiments and reasons for separating them. Again, in 1812, Hernandez, by his experiments, tried to demonstrate their nonidentity. The opinion, however, held by these men was not accepted as final until, in 1837-8, or within the memory of many now living, the result of 667 inoculation experiments proved conclusively the nonrelationship of these two diseases.

It remained for Neisser, forty-one years later, in the year 1879, to announce that he had found the specific organism of gonorrhœa. In the two decades and a half which have elapsed since then our knowledge of the far reaching character of this disease has made remarkable strides.

It was not many years ago that gonorrhœa was looked upon as a local inflammation which ran in the majority of cases a mild course, ending in complete cure. To-day we recognize in gonorrhœa a formidable infection which has invaded practically every tissue of the human body, and from which no class of society is immune. Gonorrhœa is said to be the most widespread and universal disease affecting the adult male population. It is estimated that seventy-five per cent. or more are infected.

But for rare exceptions the original site of gonorrhœal infection in the male is the urethra, and from this situation we may follow its processes of extension and complication. It remains for a short period in the anterior urethra, and in a few instances is cured without further extension. The limitation of the process to this location (in the absence of complications) offers the one bright hope of a definite cure and of relief from the uncertainty of indefinite infectiousness to others.

Anterior urethritis may be complicated by balanitis, cavernitis, cowperitis, or periurethral infiltration and abscess, or it may go on to stricture formation. Of 164 cases of stricture, Sir Henry Thompson gives the period of development as follows: Ten cases occurred during the acute gonorrhœa; 71 cases developed in one year; 41 cases developed in three to four years; 22 cases developed in seven to eight years; 20 cases developed in twenty to twenty-five years.

Consequent upon stricture there may occur extravasation of urine, dilatation of the bladder, abscess of the prostate, cystitis, pyelitis, and pyelonephritis. With the latter complications the mortality

is by no means low. By continuity of mucous membrane anterior urethritis extends backward beyond the confines of the compressor muscle to become posterior urethritis.

In what proportion of cases does gonorrhœa invade the posterior urethra? Wossidlo, of Berlin, quotes the following authors: Letzel gives it as 92.5 per cent.; Philippson, 86.6 per cent.; Rona, 90 per cent.; and Jadassohn, 88.7 per cent. This means that almost nine out of every ten cases go on to the occurrence of posterior urethritis. The gravity of the disease in this situation is marked, not by its danger to the life of the individual, or by the discomfort and pain which it occasions, but by the danger of rendering him indefinitely infectious and perhaps by rendering him sterile.

When one considers the anatomy of the posterior urethra, its floor divided into two longitudinal furrows by the caput gallinaginis, on each side of which an ejaculatory duct and, in all, from twelve to twenty prostatic ducts open, it is not difficult to understand how easily and with what frequency the gonococcus invades the prostate, seminal vesicles, and epididymides. It is equally easy to appreciate, when one thinks of the endurance and long life of these organisms, how it is possible for them to remain for indefinite periods in these deeper structures.

Many authorities, notably Finger and Frank, at present believe the prostate to be affected to a greater or less degree in practically every case of posterior urethritis, while Guyon and Fürbringer do not think it occurs so often. According to Wossidlo, Montagnon and Erand found the prostate involved in 70 per cent. of cases of posterior urethritis; Colombini, in 36 per cent. of acute, 28 per cent. of subacute, and 40 per cent. of chronic gonorrhœa. Pezzoli gives 80 per cent. as his figures. Rosenberg, Posner, and Goldberg join in this estimate of its great frequency. The varieties of prostatitis we have not space to consider here.

That it is a most serious complication we must take passing note of. It is one of the chief phases of gonorrhœa which accounts for chronicity, resistance to treatment, prolonged infectiveness, sexual neurasthenia, sexual inability, and certain occurrences that take place later in life.

As to the frequency of spermato cystitis, authors differ. Wossidlo, quoting Guyon, Neisser, Thompson, Taylor, Fuller, and others, says it occurs often. Fournier and others maintain its rarity. Lucus out of 285 cases of epididymitis found 111 cases with the seminal vesicles congested. Colombini gave the frequency in cases of epididymitis as 62.5 per cent., Chute found, in 540 patients with affections of the genitourinary organs, that 60 had an inflammation of the seminal vesicles. The importance of epididymitis is marked by its tendency to cause sterility. Finger, of Vienna, gives the following statistics of posterior urethritis complicated with epididymitis:

Rollet (1862), 2,425 cases, 27.9 per cent.
Jullien (1886), 2,500 cases, 15.2 per cent.
Tarnowsky (1872), 5,203 cases, 12.2 per cent.
Finger, 1,844 hospital cases, 29.9 per cent.
Berg (1882), private practice, 7.5 per cent.
Finger, 1,000 clinic cases, 12.5 per cent.
Gilbert (1893), 650 cases, 7 per cent.

Benzler (1898) published the following relation-

* Read before the Medical Society of the County of Westchester, at Yonkers, November 21, 1905.

ship between gonorrhœal urethritis, epididymitis and sterility:

Those rendered entirely sterile:

After simple gonorrhœa.....10.5 per cent.
After one sided epididymitis.....23.4 per cent.
After double epididymitis.....42.7 per cent.

Those resulting in the "one child sterility":

After simple gonorrhœa.....17.3 per cent.
After one sided epididymitis.....13.5 per cent.
After double epididymitis.....20.8 per cent.

This study shows two features of interest. First, that there is a considerable proportion of sterility following urethritis without apparent complication, and, second, the high proportion of sterility which follows epididymitis, and of the frequency of epididymitis we have already spoken.

Gonorrhœal cystitis as a complication, although not rare, is not so frequent as it was supposed to be before the adoption of the newer methods of examination, by the employment of which inflammation of the bladder can be ascertained more exactly. Gonorrhœal infection of the ureters, the kidneys, and their pelves is fortunately a rare occurrence, although in later life pyelitis and pyelonephritis may follow upon the obstruction to the urinary flow due to stricture of the urethra.

I have attempted in a superficial way, and omitting minor occurrences, to give some idea of the frequency with which gonorrhœa occurs in the male and affects the different important organs of the male genitourinary tract. In order to appreciate the seriousness of this malady one must know something of its prevalence as well as of its morbid extension in the body.

Our American textbooks on genitourinary diseases give but meagre statistical information regarding the frequency of this infection and the frequency with which individual organs are affected, so that it is little wonder that the student of medicine and the practising physician often fail to be impressed with the magnitude of this evil and the important racial and social problems connected with it. The insidious nature of the gonococcus and its long periods of symptomless quiescence protect this organism against discovery by those whose minds have not been trained to be ever on the alert for it, so that those who fail to appreciate its presence have no criterion upon which to build a theory that it lacks the prevalence that careful clinical experiences have demonstrated.

In concluding this chapter on the frequency of gonorrhœal infection of the male genitourinary system a word must be added regarding the course the disease runs. For it is due to its insidious nature that so many evil consequences arise. An initial attack of anterior urethritis without complication may run its course in from four to six weeks. In many cases, however, it is much longer before the healing takes place and the patient is apparently cured. This occurrence is, unfortunately, far from the rule, for, as statistics show, the chances are nearly ten to one that it will become a posterior urethritis. With the present day treatment and intelligent cooperation of the patient, I believe we should very materially decrease the number of cases that go from anterior to posterior urethritis.

When the disease becomes posterior and we have seen with what frequency this occurs, the situation

is entirely altered. It assumes a gravity in its far reaching consequences to the patient himself as well as to the community that is hard to realize. It represents a situation of which the lay mind is deplorably ignorant. So deeply rooted is the traditional notion of the insignificance of gonorrhœa, and so well supported is this belief by the absence of pain or annoying symptoms when the disease lapses into its "latent" character, that the individual oftentimes will not believe that the simple little "drop" which he perceives in the morning or the few innocent looking "shreds" which he can see in his urine, if passed into a glass, may mean that the wife whom he marries, perhaps years later, pays for his sins by receiving an infection that may cost her her life or render her a hopelessly chronic invalid.

But to return to our subject, the course run by posterior urethritis. It is marked by its chronicity, its resistance to treatment, its proneness to recur, and its uncertainty of definitive and permanent cure. To emphasize this, let me recall to mind the frequency with which the gonococcus invades the prostate gland, there to set up a mild and painless irritation or lie dormant for years, defying oftentimes the most patient, skillful and experienced treatment. M. von Zeissl sums up the situation when he says that every well informed physician will to-day agree with Ricord, that he well knows when and how the gonorrhœa began, but concerning its course and its cure it is impossible to speak with certainty. As to its infectiveness, Morrow says: "Since no disease is more surely transmissible in the married relation than gonorrhœa, the man who marries with an uncured gonorrhœa will almost certainly communicate his disease to his wife."

I am aware that I have drawn a gloomy picture of gonorrhœa in the male, but I have tried to draw a true one, taking for my material the figures and clinical experience of careful and conscientious observers. Do not draw the conclusion from what I have said that I believe that all men who have had a posterior urethritis to be permanently infectious or that all men will suffer in later life from their infections. There may be some who carry latent gonorrhœa into their married lives without infecting their wives. This, however, must be very rare. On the other hand, it is not infrequent, long after an apparently complete cure, for a man to marry and infect his wife. The following case cited by Young is an illustration of a not uncommon occurrence:

A man was treated for three or four years by an excellent physician. He put off his marriage for two years more, and finally the physician, after examining carefully with culture and cover glass preparations, told him he could safely marry. Six weeks after the wedding his wife was brought in with acute tubal disease and peritonitis requiring laparotomy and salpingectomy.

Besides the mucous membrane of the urogenital tract that of the nose, the mouth, the rectum, and all too commonly the eye, furnish soil for the gonococcus to grow upon. Of gonorrhœa as a constitutional disease in both sexes space does not permit me to do more than speak briefly. It is a comparatively infrequent sequel to the original mucous membrane infection. That the gonococcus or its toxine

is conveyed from one region of the body to others by means of the blood or lymph channels has been demonstrated by finding the organism in the blood and in the metastases. That endothelial and connective tissue structures may harbor the gonococcus we have now ample proof. The most frequent example of general infection is found in gonorrhœal rheumatism, arthritis gonorrhœica.

An average of several observers reports it as occurring in slightly over two per cent. of the cases. The literature gives us examples of gonorrhœal tenosynovitis, bursitis, myositis, periostitis, osteomyelitis, phlebitis, pleuritis, peritonitis, endocarditis, pericarditis and neuritis. Gonorrhœal lesions of the skin have been noted and reported.

The local and systemic affections of children, were they considered in detail, would fill a long chapter. It is well known to-day how gonorrhœal vulvovaginitis sweeps as an epidemic through the wards of infant asylums and hospitals. During the year 1902 there were 600 admissions to the public wards of the Babies' Hospital in New York, and among this number there occurred seventy cases of vulvovaginitis and ten cases of arthritis.

Stomatitis, as a mode of infection, has been reported in a few instances. Urethritis is by no means unusual. Pelvic complications involving the uterus, the annexa, or the peritonæum occur from time to time in children. Eight cases of gonorrhœal pyæmia without discoverable local lesion to account for the entrance of the organisms were reported by Kimball in 1903.

Out of 58,000 blind persons, the last census of the United States, Scott states that 15,000 children lost their sight from gonorrhœal ophthalmia. It is said that from 20 to 30 per cent. of all the blindness in this country is caused by gonorrhœal infection. A large proportion of this occurs as the result of purulent conjunctivitis in children infected at birth.

At the present day no one doubts that gonorrhœa of the genitourinary tract in women is a disease of great frequency. Finger and others give the following records as against Nöggerath's opinion that 80 per cent. of all women are affected with latent gonorrhœa: Oppenheimer (1884), in Kehr's clinic in Heidelberg, examined 108 pregnant women and found the gonococcus in thirty, which is 27.7 per cent.; Lomer (1885), in 32 women during the puerperium found the gonococcus in nine, or 28 per cent.; Schwartz (1886) examined 617 women, 112 of whom were suspected of gonorrhœa, and in seventy-seven cases the gonococcus was found, making 12.4 per cent.; Sängner (1889), in his series of 1,930 women, found 230 infected, which makes 12 per cent.; Dorn (1890), out of 1,000 cases, found 10.5 per cent. of the women infected; Sigmund, of Vienna, in his venereal clinic, found that of 758 public women, 63 per cent. were affected with gonorrhœa.

The site of election of gonococcic infection in the female is as follows: Fabry (1888) found the situation of gonorrhœa in thirty-eight women to be in the urethra and cervix in sixteen, in the urethra alone in twenty, and in the cervix alone in two; Welander (1888) found the gonococcus in the urethra in 89 per cent. of his cases, and in 43.7 per cent. in the cervical canal; Brünshke (1891) gave the frequency of the situation of gonorrhœa as 90

per cent. in the urethra, 37.5 per cent. in the cervix, and 12.5 in Bartholin's glands. Luczny (1891) collected from Olshausen's clinic forty-seven cases. In this series the urethra was affected in forty, the vulva in twelve, Bartholin's gland in seventeen, and the vagina in nineteen cases.

This evidence points to the urethra as being the favorite site of the original infection. In just what proportion of these cases the infection ultimately finds its way to the cervix and from thence to the uterus, tubes, ovaries, and peritonæum, it is hard to say.

In what proportion of cases the gonococcus invades the bladder and upper urinary tract it is also impossible to say, but that it is relatively infrequent as compared with the involvement of the generative organs we to-day know.

Owing to the different anatomical arrangements and construction of the genital organs in the female and the difference in their physiological functions (menstruation and pregnancy), the disease varies considerably in its course, action, and seriousness from that in the male. The onset, the course, and the termination of female gonorrhœa is so varied, the consequences to the individual and generation are so grave that I hesitate to enter upon a description that must fall so far short of being complete in a limited paper of this kind. The majority of women receive their infection from an individual who has passed from the active into the latent stage, and whose gonococci have decreased in number and to a greater or less extent lost their virulence by the attenuative influence of time on an impoverished soil.

Let me illustrate by drawing two or three typical pictures. First, a more unusual form of the disease is that of a virulent infection with a sudden onset and acute course. Its beginning is marked by the appearance of acute vulvovaginitis and urethritis, with intertrigo from purulent secretion, and urgency and frequency of micturition set in. The picture may be complicated by an acute suppurative Bartholinitis. The mucous membrane of the vulva, vagina, and urethra are intensely red and bathed in pus. With the invasion of the uterus the symptoms of acute metritis appear, fever and severe pain in the pelvis and across the back, enlargement and exquisite tenderness of the uterus, with blood and pus pouring from its cavity. The exudate extends into the pelvis and around the tubes and ovaries. Pelvic peritonitis, it may be general peritonitis, follows. Salpingitis and pyosalpinx usually occur. The conclusion may be death or a capital operation or a lifetime of invalidism and sterility.

The second and more usual type is characterized by a slow onset with a chronic course, ready to become an active process through the influences of pelvic congestion due to excessive coitus, menstruation, or pregnancy. This form of gonorrhœa we see most often in the young wife, married to a man who brings with him an uncured gonorrhœa. It is more than likely that he is unaware of the evil he is doing; he may even have the word of his physician that he could safely marry. The young and healthy woman, who never knew what disturbed menstruation or pelvic discomfort was, begins soon after marriage to ail; menstruation may become somewhat irregular and attended by increased secre-

tion from the genitals. As time goes on she notices that she becomes more easily fatigued, but she attributes these things to the natural changes that come in newly married life and puts them from her mind. At any time during a passing pelvic congestion, as at a menstrual period, the smouldering infection may light up and, extending from its temporary resting place, invade the uterus. Here it may pause or continue on its way until each pelvic organ of generation participates and they are all matted into one solid mass by the inflammatory exudate surrounding them. On the other hand this occurrence may not take place, but she may go on to pregnancy. This condition is not infrequently interrupted by abortion, or she may be delivered at term, and the gateways then open for an invasion, more rapid and severe than that we have just alluded to.

Though the streptococcus threatens life and not infrequently causes death, it is, when life is spared, more merciful. The gonococcus holds for its victim a different fate.

With the stormy period of the puerperium passed, the tedious convalescence is begun, holding in store perhaps a whole lifetime of suffering, intensified at each menstrual period. With the hope of maternity blighted, these poor women become nervous and hysterical wrecks. By the surgeon's knife they may get relief, but are left castrated women.

We have seen in these two types of disease a not unfamiliar picture, and one in which the diagnosis is usually plain. Not so obvious, however, are the great majority of cases of gonorrhœa in women. The diagnosis, as in latent gonorrhœa in men, is difficult, and without the microscope and culture tests is in most cases impossible. Neisser, in his examination of 574 public women, found 216 to have gonorrhœa, and out of this number there were only twenty-two in whom it was possible to make the diagnosis macroscopically.

The disease, starting insidiously, remains latent; its course is mild, chronic, and often without characteristic symptoms. The woman does not realize that she harbors a serious affection. The only symptom may be a leucorrhœa, which disappears for a time only to reappear. There may be a purulent discharge preceding menstruation and following it. The menstrual function may be disordered.

The great danger in this, the commonest form of gonorrhœa in women, lies in its being ever ready to extend, when a favorable opportunity offers, to the uterus and the annexa. The consequence of this we see in the obliteration of the ovi duct, the deviations and adhesions, the suppurative processes, and peritonitis. As to the frequency of pelvic inflammation due to gonorrhœa, statistics are not satisfactory. We can, however, arrive at some estimate of its prevalence.

Weiss says that salpingitis as a continuous infection occurs in from twenty-three to seventy per cent. of all gonorrhœas in women. A percentage variously estimated at from forty to eighty of endometritis and perimetritis is of gonorrhœal origin.

Eighty per cent. of all deaths from pelvic disease in women are due to gonorrhœa, quoting Morrow. Price said that in over a thousand sections for pelvic inflammation ninety-five per cent. of the cases were attributable to gonorrhœa, and that in ninety-five

per cent. of these the history was reliable and clear.

As to gonorrhœa as a cause of sterility, one author states that fifty per cent. of all involuntarily childless marriages are made so by gonorrhœa of the female organs of generation, of which forty-five per cent. are due to marital infection by men. On this point there seems to be but little difference of opinion. Nöggerath asserted that fifty per cent. of sterility in women was caused by gonorrhœa. Lier-Ascher found, out of 227 women, 121 sterile because of gonorrhœa. Neisser contends that gonorrhœa is a more potent factor in the depopulation of countries even than syphilis. He regards gonorrhœal infection as responsible for more than forty-five per cent. of sterile marriages. In eighty sterile marriages Kehr found forty-five caused by inflammatory and other changes, all of gonorrhœal origin. This is upward of fifty per cent.

Janet, in 1902, while discussing Social Defense Against the Venereal Peril, declared that gonorrhœa with tuberculosis, perhaps more than tuberculosis, was the great pest of our age. If we compare from a social point of view the importance of gonorrhœa with that of syphilis, gonorrhœa is to syphilis as 100 is to 1, not only from the standpoint of the number of persons attacked, but also from the standpoint of the gravity of the lesions and their perpetuity. Gonorrhœa modifies in a manner often permanent the genital organs of patients, renders them infinitely dangerous for the women they approach, causes all metritides and annexial inflammations which to-day give to surgeons three-quarters of their work, and conduct finally both men and women to sterility.

It is regrettable that this important matter has received so little attention in American textbooks of gynæcology and genitourinary diseases, and that students of medicine should start on their career as physicians with such limited knowledge regarding the extent and consequences of this social menace.

I must unfortunately pass by that phase of the subject which has to do with prostitutes and prostitution with but a single remark, that it is probable that practically every woman of this class, before she has been long in the occupation, is gonorrhœal and a source of danger. In this class are to be included many women working in stores, in factories, as servants, or in theatrical companies, etc., who expose themselves to this form of infection.

The Physician's Responsibility.—It may be said, the largest, and surely the saddest, part of this great public evil has its origin in the people's, our neighbors', our friends', our patients' ignorance of the subject. The only key to the situation is the light of true knowledge, and the only source at present of this light is the medical profession, of which you and I are members.

Bibliography.

- Bierhoff, F. Gonorrhœal Cystitis in the Female. *Medical News*, January 12, 1901.
- Casper, L. *Lehrbuch der Urologie*, Berlin, 1903.
- Finger. Blennorrhœe der Sexualorgane. *Handbuch der Urologie*, iii, part 14. Wien, 1905.
- Johnson, J. F. *Further Remarks Upon Gonorrhœa. Responsibility in Authorizing Marriage*, New York, 1904.
- Kornfeld. *Gonorrhœe und Ehe*. Wien, 1904.
- Kimball. Gonorrhœa in Infants, with a Report of Eight Cases of Pyæmia. *Medical Record*, November 14, 1903.

- Keersmaecker and Verhoogen. *Chronic Urethritis*, New York, 1901.
 Morrow. *Social Diseases and Marriage*, 1903.
 Marshall. *Syphilis and Gonorrhœa*, 1904.
 Nöggerath. *Transactions of the American Gynecological Society*, 1877.
 Scott. *Heredity and Morals*, 1900.
 Sanger. *Die Tripperansteckung beim weiblichen Geschlechte*, 1889.
 Von Zeissl. *Diagnose und Therapie des Trippers*, 1903.
 Weiss. Contributions to the Pathology and Treatment of Acute Gonorrhœa. *Medical News*, September 10-17, 1904.
 Wossidlo. *Die Gonorrhœe des Mannes*, 1903.
 616 MADISON AVENUE.

A THEORY OF PROTEIN METABOLISM.*

By OTTO FOLIN, PH. D.,

WAVERLEY, MASS.

It is a well known fact that the destruction of protein within the human body is diminished, but does not altogether cease, when the supply of food protein is cut off. The greatest diminution in the daily protein destruction is obtained by the use of diets which contain liberal amounts of carbohydrates and fats, and which at the same time are free or almost free from nitrogenous constituents. Soluble starch and melted butter or rich cream can easily be made into liquid mixtures which contain almost no nitrogen, yet are rich in fuel value, and which can be taken without any great discomfort for a week or two at a time.

Under the exclusive use of such nearly protein free diets the daily urinary nitrogen continues to diminish for from five to seven days and then remains practically stationary at from 2.5 to 4 grammes. The larger or more muscular the person is the more nitrogen does he eliminate toward the end of such a feeding experiment, but I have seen the nitrogen elimination of a vigorous man weighing 200 pounds sink to less than four grammes a day. On a diet containing 119 grammes of protein the same person eliminated daily from sixteen to seventeen grammes nitrogen with his urine.

Detailed analytical studies of urines rich in nitrogen and of urines containing the minimum amount of nitrogen have brought out facts which show, I believe, on the one hand that the prevailing views concerning the composition of normal human urine are erroneous, and on the other that the current theories of protein metabolism are untenable.

Only urines rich in nitrogen have the chemical composition that is supposed to be normal. Every decided diminution in the total nitrogen is accompanied by unmistakable changes in the relative proportions of the more important nitrogenous products.

The fall in total nitrogen is chiefly represented by a fall in the urea elimination. The prevailing idea that the urea contains about ninety per cent. of the total nitrogen in normal human urine is therefore erroneous. Urea nitrogen representing ninety per cent. of the total is found only when a great deal of protein is destroyed within the body, and when the urine in consequence is rich in total nitro-

gen. When the daily protein consumption is reduced and the total nitrogen elimination is diminished the per cent. of that nitrogen present as urea sinks more and more until it finally represents less than sixty, sometimes even less than fifty per cent. of the total nitrogen. This fact must be taken into account in the examination of pathological urines. When such urines are low in total nitrogen the urea determination alone is very misleading. The urines may be normal and yet may contain only five grammes of nitrogen and only seven grammes of urea.

Since the urea nitrogen sinks more rapidly than the total nitrogen when the daily protein catabolism is diminished, it follows that some other nitrogenous products must at the same time become relatively more and more prominent. The most interesting product in this connection is one that has received comparatively little attention in the urine analyses of the past, namely creatinin. Creatinin is a simple compound containing about thirty-seven per cent. of nitrogen and is present, I believe, in all urines. As creatin it constitutes the chief nitrogenous extractive in the extracts of muscles. The occurrence of creatin and the absence of urea in muscles has always seemed a most peculiar circumstance in view of the fact that urea has been supposed to constitute the chief nitrogenous end product in protein catabolism.

When the total daily protein catabolism is reduced, creatinin not only becomes more and more prominent as a catabolism product, but the absolute amount of creatinin eliminated is not at all affected by the diminution in the elimination of total nitrogen. Whether a person consumes 118 grammes of protein per day and eliminates sixteen grammes of nitrogen in the urine, or whether he takes no protein whatever with the food and eliminates only three grammes of nitrogen with the urine is immaterial so far as his creatinin output is concerned. If he is an average sized man he will in both cases produce and eliminate about 1.5 grammes of creatinin per twenty-four hours. His urea will in the first case amount to thirty grammes and in the second case to only three grammes.

The striking difference in the rôle played on the one hand by urea and on the other by creatinin in our daily metabolism constitutes the pivotal fact upon which I have ventured to construct a somewhat new theory concerning protein metabolism. The theory involves the study of a number of other urinary constituents, but it is impossible to include these in a fifteen minute paper.

The constancy in the creatinin elimination and the constant presence of creatinin in muscle extracts, when considered in connection with the enormous fluctuations in the urea elimination and the almost complete absence of urea or of any adequate precursor of urea in muscle extracts indicates, it seems to me, that these two products are the representatives of two different kinds of protein metabolism. Since the catabolism which gives rise to creatinin appears to be for each individual a constant quantity no matter how much or how little nitrogenous food is taken, and since its chief decomposition product is demonstrably always present in muscles and other tissues, it seems justifiable to consider this metabolism the tissue

* Paper read before the Medical Association of the Greater City of New York October 9, 1905. For the experimental data and for a full discussion of the problems touched upon in this paper the reader is referred to the January and February (1905) numbers of the *American Journal of Physiology*, pages 66-138. From the Chemical Laboratory of the McLean Hospital, Waverley, Mass.

metabolism. On the other hand, since the katabolic processes which produce nearly all the urea vary within such enormous limits and so directly with the supply of food protein, and since the urea is always strikingly absent in the muscles, it seems fair to consider these catabolic processes as part of a more localized and more specialized form of protein metabolism. I have called it the exogenous metabolism.

The tissue metabolism represents the daily wear and tear of all the cells in all the different tissues while the exogenous metabolism represents the specialized activities of certain definite organs, as the digestive tract and the liver. The total amount of tissue catabolism occurring in twenty-four hours depends only on the number and condition of the cells in the individual. The total quantity of the exogenous metabolism is independent of the size of the person. It depends normally only on the amount of available protein contained in the food. A half grown boy with a good appetite may produce more urea than a 200-pound man, but his creatinin will remain small.

If it is thus possible to distinguish between two distinct and independent forms of protein metabolism, it is clear that the question of the proper or most advantageous nutrition for man must appear in a new light, so far as his protein consumption is concerned. Voit as well as Pflüger considered protein metabolism all of one kind. This metabolism, moreover, they supposed to be of considerable magnitude and of corresponding importance, and it is not to be wondered at that they threw their full support in favor of a protein consumption that should be no less than what they actually found it to be in strong and vigorous men. From Voit, the originator of standard diets, we have consequently inherited the idea that the necessary protein metabolism in man corresponds to an intake of about 118 grammes of protein per day, and that in the long run it becomes dangerous to reduce the protein consumption below that amount.

However, with the separation of protein metabolism into tissue metabolism and exogenous metabolism, and with the total tissue metabolism not only very small, but also constant in amount, it is clear that the question of the necessary protein consumption must be considered from a standpoint different from that of Voit.

In so far as the tissue metabolism is concerned the question of the necessary protein contents of the daily food can be eliminated as of very little practical importance. For almost any natural food product, if taken in sufficient amounts to furnish the necessary fuel value, will contain as much protein as is called for by the tissue metabolism. The question of the optimum protein consumption would therefore seem to depend chiefly, if not exclusively, on the significance and importance of the exogenous metabolism.

A very small quantity of protein, probably not over twenty-five grammes a day, is apparently sufficient to maintain unimpaired the tissue metabolism in an average sized person. The surplus protein consumed is of value only in so far as it can be oxidized and yield energy. But the surplus protein is not decomposed as protein in such general

tissues as the muscles. Protein can therefore not be used directly by the human organism as a source of energy. Before the surplus protein is oxidized in the general tissues it is stripped of its nitrogen by special hydrolytic processes in special organs which are rich in hydrolytic ferments. The greater part of the urea formation is the result of these preliminary hydrolytic processes, and this urea formation has practically no connection with the general oxydative processes which liberate energy. The rapid increase in the elimination of nitrogen after a protein rich meal, and the pronounced tendency of the human organism to establish nitrogen equilibrium present merely this preliminary removal of superfluous nitrogen, of nitrogen which the organism does not need and cannot use. The carbonaceous part remaining after the nitrogen has been removed from such protein is not used up immediately, but is probably converted into carbohydrates and is then stored as carbohydrates and fats, and is utilized only as rapidly as it is needed.

The exogenous metabolism then is only a preliminary process which has become necessary because our food products contain greater proportions of nitrogen than are necessary for the unimpaired maintenance of the normal full grown organism. But if this view is correct then we clearly have at present no reason for assuming that anything like the 118 grammes of protein demanded by the standard diets is either necessary or advantageous for normal men with unimpaired digestions. Nor have we, on the other hand, any valid reason for assuming that the consumption of 118 grammes of protein is necessarily detrimental. The exogenous catabolic processes seem abundantly able to convert the nitrogen of large quantities of protein into urea which we know is harmless. Still, after having concluded that so much protein is probably neither necessary nor advantageous and in view of the fact that the organism does so rapidly remove the superfluous excess of nitrogen, it would seem possible and probable that the highest efficiency of the normal organism requires a more moderate use of protein than is indicated by the standard diets.

In this connection it should be distinctly stated that protein and meat are not considered as identical terms. There can scarcely be any doubt that continuous excessive meat eating is detrimental, only to my mind it is an unsettled question to what extent the detrimental effects of meat may be due to its protein contents. Crude meat must contain waste products as well as autolysis products, and it requires no stretch of the imagination to suppose that some of these may finally produce profound metabolism disorders in certain predisposed or intemperate individuals. At present we may not be able to point out a single waste product to which we can fairly ascribe the deleterious effects of meat, yet we are probably all inclined to believe that they are there. That some substances with more or less marked toxic properties are eliminated with the urine we know, that others are eliminated through the respiratory processes we have every reason to believe, and there is in my judgment no ground for doubting the existence of similar substances in the muscles of the animals which we use as food.

What has been said concerning the composition

of human urine and concerning the nature of protein metabolism and its bearing on the nutrition of man is based on experimental data obtained from normal persons. It seems certain, however, that if the conclusions reached are correct their application to the study and dietetic treatment of diseases constitutes a most promising and important field for further investigations.

SUGGESTIONS ON THE NATURE AND TREATMENT OF RHEUMATISM.

By W. E. DEEKS, M. A., M. D.,

NEW YORK.

Of the many afflictions from which humanity suffers there is none more frequently met with, more universal in its distributions, or more varied in its manifestations, than rheumatism. From the days of Hippocrates to the present, references to it are found in all medical writings. Under this name were formerly described a number of affections which were distinct in their ætiology and symptomatology. Some of these have now become isolated as distinct diseases, but there still exists an enormous collection of symptoms vaguely described as rheumatic without any precise idea as to their relationship or ætiology.

A great deal of investigation has been given to the causation and treatment of rheumatism and empirically a great deal of knowledge has been obtained. At the present time, however, the tendency is to treat the rheumatic syndrome with a prescription or to advise the patient to visit some mineral springs hoping to relieve as many symptoms as possible without any degree of certainty as to the ætiology or the results.

After a thorough review of the literature of the subject, it has seemed to the writer that a direct relationship between rheumatism and the conditions of the stomach has not been elucidated, and it is with the hope of throwing some light on rheumatic affections in general and upon this relationship in particular that this paper based upon clinical observation is written.

Clinically articular rheumatism is described usually under the headings acute, subacute, and chronic, the symptoms of which merge gradually into each other. Ascribed to the same poison also are a number of affections, such as muscular rheumatism, tonsillitis, pleurisy (one type), erythema nodosum, lumbago, iritis (one type), ulcerative keratitis, sciatica, pleurodynia, and neuritis in other situations.

If it be granted that all the above named affections are manifestations of the same poison in different organs (as seems justified from clinical experience) the importance of every fact gleaned in regard to its nature becomes apparent.

Several theories have been advanced from time to time in regard to the ætiology of rheumatism each of which has had its advocates, but up to the present no one has fulfilled the scientific conditions necessary. Among them may be mentioned the following:

Cullen's theory. He believed that rheumatism was due to the direct influence of cold on the joint structures, the coverings of which were so

thin that they were unable to protect the deeper tissues.

Nervous theory. This was suggested and advocated by J. K. Mitchell, and in a modified way accepted by a number of well known physicians. They believed that the lesion was somewhere primarily in the spinal cord, a sort of catarrhal neurosis, and that a cold or some irritation acted as the exciting cause.

Friedlander's theory. He believed that the lesion was located in the medulla near the nuclei of the vagus and glossopharyngeal nerves and that the articular lesions are but the peripheral manifestations.

Embolie theory. Heuter suggested that the disease was due to a microorganism which first invaded the endocardium producing endocarditis and from this emboli were distributed throughout the circulation to the parts affected.

Miasmatic theory. This was advocated by Saunders, Haygarth, MacLagan, and others. They believed that the poison was closely allied to malaria in its manifestations.

Infective theory. More recently this has been widely advocated because of the presence in the lesion of a diplococcus. It is claimed that the lesions resemble pyæmia in their distribution, but differ in that they do not go on to suppuration. Later on this will be referred to in greater detail.

The lactic acid theory has had more advocates than any other. It originated with Prout who claimed that the rheumatic poison was lactic acid and originated as a chemical poison from the perversion of some nutritional process. Lactic acid is a product of tissue metamorphosis, and is produced during muscular activity. It may be excreted unaltered or become oxidized into carbon dioxide and water. Its adherents believe that chilling of the skin arrests sweat excretion and consequent elimination of lactic acid. Profuse perspiration is an effort of the system to throw off the poison. This theory was opposed by such men as Garrod, Bouchard, Fuller, MacLagan, Salomon, etc. The strongest evidence in its support, however, was that adduced by Sir Walter Foster in 1871. He administered small doses of lactic acid to a patient suffering from diabetes mellitus and immediately set up an acute attack of rheumatism. The rheumatism subsided with the cessation of the administration of the lactic acid and recrudesced when it was again given.

Neurochemical theory. This was advanced by Dr. Latham as a modification of the lactic acid theory. He thought that exposure to cold caused constriction of the cutaneous vascular areas and reflexly through the vasomotor system corresponding dilatation of the vascular areas of the muscles and of the viscera, thus increasing molecular transformation in their substances. Products of muscular metabolism are lactic and glycolic acid, and these passed into the system unoxidized. Latham believed that uric acid is the actual poison both in rheumatism and gout, but that in rheumatism the phenomena are modified by the presence of lactic acid in addition.

In the above brief theoretical review the divergence of opinions shows how far we are yet from a solution of the problem. Although most of

the writers are willing to concede lactic acid as an important causative factor, no adequate source as to the recurring supply has been heretofore mentioned. They all deem it impossible that excessive muscular metabolism will account for it; for during an acute or subacute attack, patients are unable to perform muscular exertion for weeks together.

It is a common feature of life to observe how a fallacy will take possession of the public and become popularized. Even in medicine this holds good. The rheumatic bane of humanity is now popularly considered to be uric acid. It has taken possession of the lay mind. Every pain or ache is laid at its door. It is a common thing to have a patient come to the office and say, I am suffering from uric acid. What can I do for it? He has swallowed gallons of lithia water and other vaunted uric acid remedies, and unimproved then seeks the doctor's aid. By him he is then advised to give up red meats, coffee, and other forms of nitrogenous diet which favors the production of uric acid, and finally when no improvement occurs is sent to some mineral springs where he has a further routine eliminative treatment. As a matter of fact uric acid is probably a very important factor in gouty conditions, but not the most common factor, in this country, at any rate, in rheumatic affections. We see very little of gout, and consequently little reason for practising the elimination of uric acid.

Before taking up the consideration of rheumatism proper, it is well to mention a number of conditions which we frequently meet with, which are termed and treated as rheumatism, but which have nothing to do with the rheumatic poison.

Neuritis or neuralgia may be due either (1) to some local condition such as tarsalgia in the breaking down of the arch of the foot; intercostal pain due to some inflammatory condition in the vertebral column or pleura; sciatica from pelvic adhesions; hepatalgia from liver troubles, etc., or (2) to some constitutional condition or infection, as anæmia, syphilis, Bright's disease, diabetes, rickets, gout, rheumatoid arthritis, malaria, toxic neuritis, gonorrhœa, etc., or (3) to some central disturbance either neurasthenia, hysteria, or masturbation.

Recently three cases due to the last cause came under my observation, all of whom had been treated for rheumatism. In one case the pain was in the hip joint and simulated disease of that structure. In another it partook of the character of multiple pleurodynia with the tender points present and even some elevation of temperature at night; and in a third rectal spasm with loss of control over defæcation.

It follows, therefore, that the multiplicity of conditions which may simulate rheumatism makes it most important that a careful diagnosis be first made before a rheumatic regimen or treatment be adopted.

In the observation of a great many cases of rheumatism of all forms, the writer of this paper was confronted with their invariable association with some stomach disorder of the hyperacid or fermentative type. Although frequently the patient denied that he or she was a

sufferer from stomach trouble, still a careful symptomatic history would reveal its presence. The discovery of this relationship led to the investigation of a series of related diseases, tonsillitis, iritis, pleurisy, etc., for the presence of the same factor, with invariably the same result. The conclusion was then drawn that probably the condition of the stomach was the primary factor, or at any rate was an antecedent feature, in the causation of rheumatism and prepared the way for the invasion of some specific organism.

If this were true then it would be necessary in all cases of acute and chronic rheumatism to first get rid of fermentative processes in the stomach before treating the organ or tissue affected, if permanent results were to be obtained. Clinically this again has been found to be the case. It was necessary, however, to treat the acute symptoms by some specific rheumatic measures. This method has been followed by the writer with invariably good results, as he has abundant clinical evidence to prove.

In an article published by him in the *New York Medical Journal* on January 25th and July 2d, 1905, on the Carbohydrates as Ætiological Factors in Stomach Disorders, he endeavored to show relationships between the carbohydrates and fermentative dyspepsia and since then has had abundant evidence to confirm the conclusions then made.

In the same paper the relationship of dyspepsia and rheumatism was suggested. In brief it was there stated that there are two distinct forms of dyspepsia: (1) That due to sugar; characterized by excessive acidity, rapid digestion, recurring hunger, small appetite, pyrosis, and belching attended or not by the expulsion of gas, depending on whether starch is or is not a large factor in the meal. The tongue is clean or coated according as the bowels are active or not. These people are usually thin. (2) That due to the excessive indigestion of starchy foods, chiefly bread and potatoes, characterized by lack of appetite until the stomach is stimulated, then large meals are taken; distress and weight over the cardiac end of the stomach, the late evolution of copious volumes of gas, the sensation of drowsiness after meals, palpitation, shortness of breath, and a pale, flabby, coated tongue. These people are usually well nourished.

Of course there are gradations between these types, but the characteristics of each are well defined. It is in these two classes of subjects that we find our rheumatic patients.

Before discussing the relationships between rheumatism and dyspepsia it is well to consider the following facts: (1) The stomach is chiefly a secretory, not an absorptive organ. (2) No food passes from it till sufficiently liquefied and acidified to overcome the pyloric reflex. (3) Cane sugar is not a natural food and occurs in such small quantities in nature that in the ordinary evolution of man no ferment was provided in the stomach for its transformation. (4) Such ferment exists only in the small intestine and there renders the sugar absorbable and assimilable by its conversion into dextrose and

lævulose. (5) A large part of the ingested sugar undergoes fermentation in the stomach before it reaches the intestines by being acted on by the *Bacterium lactis*, *Bacillus butyricus*, etc., producing lactic acid, butyric acid, etc., which are irritating and diffusible. (6) When sugar is converted into the organic acid series it takes up the hydroxyl groups and in consequence an ounce of sugar produces more than an ounce of acid. (7) Sugars are taken most frequently in warm solution and are in consequence well suited for immediate conversion into acid through fermentation before they have an opportunity of passing into the small intestines. (8) What has been said of cane sugar is also largely true of maltose into which starch is converted in the mouth and stomach.

It can be seen from the above considerations that we have a fruitful source for the presence of the lactic acid series without taking into consideration its source as a product of muscular metabolism. That lactic acid is an important factor in the stomach contents of all sufferers from acid and fermentative dyspepsia every investigator of the diseases of the stomach knows.

If the practitioner will observe (and statistics will also confirm it), he will always find an unusual crop of tonsillitis, neuritis, and kindred rheumatic affections directly after the holidays, and during the fresh fruit seasons when sugar is excessively used.

If sugar, and in a lesser degree, excessive starches be found to be important factors in the causation of rheumatism, as they undoubtedly are the chief factor in acid and fermentative dyspepsia, what relationship exists?

In a work recently published by Symes a summary of the bacteriological research is made in which he says: "Recently Poynton and Paine, Beattie, Ainley Walker, and Shaw have described a diplococcus as the specific organism exciting acute rheumatism. This organism, which has been styled the diplococcus rheumaticus, is apparently identical with that described by Wassermann, and very probably corresponds to the diplococci and streptococci found in acute rheumatism by earlier observers. I have myself been able to isolate this diplococcus from the urine of a patient suffering from rheumatic fever, and from the blood of two patients with ulcerative endocarditis following attacks of acute rheumatism. It is, however, always difficult to demonstrate the cocci in the blood and effusions, and better results are obtained by cutting and staining sections of local lesions, such as inflamed synovial membrane, cardiac vegetations, and subcutaneous nodules. The growth on blood agar is characteristic, the small discrete colorless, transparent colonies gradually spreading as a film over the surface, and converting the red blood into a rusty brown or greenish brown background; in alkaline broth a precipitate forms, the broth remaining clear and gradually becoming acid in reaction. Neutral milk is coagulated in forty-eight hours. In liquid media streptococcal forms appear. In the tissues solitary coccal forms appear, and in old cultures involution forms like diplobacilli are found in chains. The

diplococcus rheumaticus does not form gas or indol. It stains readily with aniline dyes, and is not decolorized by Gram's method."

"The chief advance in the bacteriology of rheumatic fever made in recent years is the demonstration of the fact that the diplococcus is a specific organism. The evidence brought forward to prove this point is as follows: Attenuated cultures of the pyogenic cocci if inoculated into animals do not produce the lesions peculiar to rheumatic fever, whilst those of diplococcus rheumaticus have been shown to excite myocarditis, pericarditis, endocarditis, arthritis, and pleurisy. These lesions excited in animals are strictly comparable histologically with those associated with such rheumatic lesions as chorea and subcutaneous nodules. It is distinguished from other streptococci by the fact that it can flourish in a fluid medium in which pyogenic streptococci have been grown. (Marmorek's test)."

Two facts, therefore, in regard to rheumatism seem to be finally settled. First, the presence of a specific organism in the tissues affected, and, second, the presence of stomach disorders of the hyperacid and fermentative types through the malassimilation of sugar and starches. This latter fact is a matter of everyday clinical observation and case reports in great numbers can be given to prove this contention. This the writer considers of the greatest importance, for without it the specific diplococcus of rheumatism seems to be disarmed and robbed of the special nidus for its development. Whether that development is in the stomach or tissues he is not prepared to state, but probably it is in the tissue because of the universality of the lesions, the presence of the diplococcus in the tissues affected, and the diffusibility and absorbability of the lactic acid series.

It is not contended that the sole factor in rheumatism is lactic acid, but both lactic acid and related acids; or in any event the ordinary products of fermentative dyspepsia.

It is a striking fact, however (as will be seen from the foregoing), that the specific rheumatic diplococcus grows best in a medium of broth and milk acidified with lactic acid, and it has been shown that we have in acid dyspepsia the necessary amount of acid present to favor this growth through the fermentation of sugar.

The exciting causes of a rheumatic attack are usually two, either reflex congestion of deep seated structures through exposure to cold or the physiological determination of blood to a part. I remember well a physician who consulted me, a typical sugar eater and sufferer from hyperchlorhydria and rheumatism for fourteen years. When he rode on horseback he suffered from sciatica and when he drove spirited horses requiring a good deal of muscular exertion in his arms, his spine and shoulders suffered from the pain. In his case the physiological determination of blood located the rheumatism and we are all familiar with those types excited by an exposure to cold.

The suggestion naturally arises, why do not all excessive sweet eaters suffer from rheumatism? The reason is that they are so constituted

that the fermentative changes do not take place in the stomach and thus prepare the nidus or necessary condition for the invasion of the diplococcus. Instead of lactic acid or some similar fermentations, an alcoholic may predominate through the presence of yeast and this would naturally not only use up the available sugar but at the same time prove inimical to the development of the lactic acid ferment.

But no two persons are alike in their natural powers of assimilation and resistance and the rheumatic diathesis so called is probably associated with the power to assimilate or not the carbohydrate foods ingested. Have we not in this suggestion of the relation between rheumatism and stomach disorders a reason for the old alkaline treatment which was so long in vogue and which in some cases gave good results; also in the alkaline treatment of mineral springs when the following conditions result, (1) a neutralization of stomach contents, (2) an increased diuretic and diaphoretic action, and (3) a direct neutralizing action in the blood?

How does salicylic acid influence rheumatism? In the first place it is a powerful agent in preventing fermentation of all kinds, including lactic acid. In the blood it circulates as such and there acts directly on the specific organism. Again, according to Mutchler, it favors the growth and development of the yeast cell which would utilize the pabulum upon which the *Bacterium lactis* thrives.

According to the same author, the yeast cell is not destroyed by formalin in dilute solution, chloroform, alcohol, ether, or tannic acid, whereas it is by hydrogen peroxide, acetic acid, tartaric acid, and probably others of the same series.

In view of the above considerations a rational treatment for subacute and chronic rheumatism and one which invariably gives good results if carefully adhered to, is treatment directed towards the relief of stomach symptoms in the first place. From the diet should be excluded absolutely for a time sugar and potatoes; and bread should be greatly limited, particularly toast. If fermentation still exists the administration for a few days of dilute nitric acid in twenty drop doses well diluted before meals; or if constipation be present, rhubarb and soda after meals is indicated. Some one of the salicylic acid series internally, such as sodium salicylate, etc., in physiological doses should be given; and finally the administration of counter irritants and electricity, either static sparks or high frequency currents. When the patient has been a sufferer for a long time complete recovery is somewhat delayed, as there is undoubtedly some more or less chronic inflammatory tissue which is slow to resolve.

In regard to sufferers from acute articular rheumatism or any other acute manifestations of the disease, the same general principles should be adhered to. Over and over again one finds acute articular rheumatism, tonsillitis, or neuritis, following excesses in sweets and subsequent exposure to cold.

(One of the most marked features about the history of young people who are suffering from damaged hearts, resulting from acute rheumatic attacks, is the prolonged use of excessive sweet diets through pernicious artificial foods or foolish indulgence in confectionery, and the attendant stomach disorders. The writer has never failed to obtain such a history if the patient or the relations were closely questioned.

It would be possible here to give a great many case reports both in private and public cases illustrating clinically the foregoing general principles, but space will not permit.

In conclusion it may be said that there appears to be little doubt about the conditions underlying the rheumatic syndrome, but the exact relationship remains still to be proven. Three things appear to be necessary in the ætiology of a large group of rheumatic conditions: (1) Fermentative dyspepsia back of which is sugar or starch in excessive quantity. (2) The presence of the diplococcus rheumaticus, and (3) cold or physiological congestion of blood as the exciting cause.

The above clinical observations are an open book to every physician who practices general medicine and the suggestions therein contained can be confirmed by him in the daily routine of his profession. The writer only hopes that they will prove as useful to those who follow them as they have been to him. He does not claim that all rheumatic affections are due to this cause, but that a great many so called rheumatic diseases are.

19 EAST TWENTY-EIGHTH STREET.

The Radical Cure of Severe Femoral and Inguinal Hernia.—Nicoll offers the following technique: 1. Femoral hernia—Expose the sac, open it longitudinally and release its contents, separate it from its surroundings, dissect it longitudinally, make an aperture in one of the segments and draw the other through it, cut away a portion of sac if necessary and reduce the remainder. For the operation: 1. Incision to the bone from the femoral vein, along the pubic ramus to the pubic spine. 2. Detach and retract the periosteum. 3. Drill the bone near its upper in two places, half an inch apart. 4. Thread one of the openings with stout catgut loops. 5. Divide the loop, pass each end separately as mattress ligature through Poupart's ligament. 6. Pass both ligatures through the second drill hole. 7. Tie the ends so as to bring Poupart's ligament to the posterosuperior surface of the bone. 8. Unite with interrupted catgut sutures the pectineal origin and pubic portion of fascia lata with the anchored Poupart's ligament. 2. Inguinal Hernia: Obliterate sac and form intraabdominal buttress as in femoral hernia. For the operation: 1. Pull spermatic cord upward and Poupart's ligament downward. 2. Incise the superior aspect of pubic ramus. 3. Detach both margins of periosteum. 4. Drill two holes, as before, between pubic spine and femoral sheath. 5. Pass mattress suture through internal pillar of hernial aperture. 6. Pass the ends of the sutures through the holes drilled in the bones. 7. Tie the ends of the two loops of ligature separately. 8. Complete by lifting Poupart's ligament to the anterior surface of the internal pillar, fixing it by interrupted catgut sutures, which pass through internal and external oblique muscles.—*Annals of Surgery*.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at frequent intervals. So far as they have been decided upon, the further questions are as follows:

XLVII.—How do you treat whooping cough? (Answers due not later than February 15, 1906.)

XLVIII.—How do you treat pruritus ani? (Answers due not later than March 15, 1906.)

XLIX.—How do you treat lumbago? (Answers due not later than April 16, 1906.)

Whoever answers one of these questions in the manner most satisfactory to the editors and their advisors will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but not required) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLVI has been awarded to Dr. James Porter Fiske, of New York, whose article appeared on page 401.

PRIZE QUESTION NO. XLVI.

THE TREATMENT OF SPRAINED ANKLE.

(Continued from page 403.)

Dr. Herbert G. Johnson, of Malden, Mass., remarks:

If the patient is seen soon after the injury I apply hot water by pouring it over the ankle from a pitcher or bathing it with foot immersed in hot water from five to ten minutes. Then I wrap up the ankle in bandage, which is to be kept wet from twelve to eighteen hours. During this time the patient should have complete rest.

After removal of the bandage I give a gentle massage to the injured ankle and then apply a strapping of surgical plaster, as follows: I cut a number of strips (fifteen or more), one inch in width and thirteen or fourteen inches long. Beginning at the instep I have the middle of each strip of plaster at the bottom of the foot. The ends I carry across the front of the foot to lap over. The second strip to cover half the first strip and so on up the foot to two inches above the ankle. I reinforce the ankle by two or three additional strips.

If carefully applied this makes a smooth, firm dressing, giving support and relieving pain. I permit a moderate use of the foot in walking if no severe pain is felt when the foot is placed on the floor.

In two or three days a fresh strapping is applied over the first dressing and the whole allowed to remain a week or ten days or until tenderness and pain are relieved.

Dr. P. Duncan Littlejohn, of New Haven, Conn., says:

In the treatment of a sprained ankle one must keep in mind both the pathology of the lesion and

the anatomy of the part. Pathology: The pathological process varies according to the extent and severity of the injury. A sprain may be of so slight a nature that it disappears in a day or two, or it may be so severe as to become a complication of a fracture or dislocation. The parts involved are most frequently the lateral aspects of the joint, as I will explain later; and the process is as follows: The synovial membrane of one side is torn away from its attachment, while it is compressed and crushed on the opposite side. The ligaments being very inelastic may stretch slightly, but if the traction is continued many fibres are completely ruptured.

The swelling which follows a sprain is caused by extravasation into the soft parts, and results in an active hyperæmia. If there is an extensive effusion into the joint cavity and parietal structures, the pain is materially increased and the liability to subsequent adhesions is very apt to occur. Occasionally through extensive bleeding, blood clots are deposited in the joint, and later becoming organized, strong attachments are formed, and possibly ankylosis developed. Anatomy: The ankle is a ginglymus or hinge joint, and hence its motion, we may say, is limited to two directions. This being so, when a sudden strain is put upon the joint, the line of displacement passes through the plane in which normally there is the least mobility. Therefore the lateral ligaments and surrounding soft parts receive the greatest amount of strain, and consequently we understand why, in a sprained ankle, the lesion is so often situated on one or both sides of the joint in question.

Treatment: Owing to the brevity of this paper I will confine myself to a discussion of the treatment of acute sprain, barely mentioning the chronic variety, and describe the method of treating the former type, which I have found to be eminently satisfactory for the past few years. Gibney and Cotterell were the first to advocate strapping with adhesive plaster and early ambulatory movements. Wharton and Curtis also speak highly of this method, but they only wrap the affected side of the ankle. The latter form of treatment does not give the rigidity to the dressing that is afforded where the whole foot and ankle are enclosed in adhesive plaster.

First the leg is thoroughly shaved from the knee downward and thoroughly cleansed with soap and water. Ether is then applied freely, which insures better adhesiveness of the plaster. The best grade of zinc oxide plaster is always used, for its many obvious advantages. The foot is now restored to its normal position as far as possible, is put in acute flexion, and held by an assistant while the dressings are applied. The correct relations of the foot and ankle are extremely important, as carelessness in this respect may result in painful adhesions and a slow recovery.

A strip of plaster twenty inches long and two inches wide is fastened four inches below the knee, on the inner side of the leg. This extends down parallel to the long axis of the limb, along the posterior edge of the tendo Achillis, under the heel and up the corresponding outer side of the leg. A second strip of the same size is applied just in front of this, overlapping the former a quarter of an inch. Thus both malleoli are covered in, and the foot is

held in a rude stirrup. These straps materially limit lateral mobility. A strip one inch wide is started on the dorsum of the foot just behind the insertion of the middle toe; is carried backward along the inner edge of the foot, parallel to and just above the contour of the sole, around the heel and back the outer side of the foot to the starting point. A similar strip higher up, overlapping its fellow by one quarter inch, is applied. Beginning just above the internal malleolus, a strip one inch wide follows the first long strip applied down under the heel and up the outer side of the ankle to just above the external malleolus. Alternate strips are now applied in the order of the above description until the whole foot and ankle are covered, except a small space at the heel. A light gauze bandage from the toes well up the leg protects the adhesive plaster.

An ice bag is fastened over the injury and kept on three out of every four hours. The cold applications are usually dispensed with by the end of the first day, as the pain is relieved rapidly. The limb is now elevated and absolute rest is enjoined until the second day.

After forty-eight hours the patient is given a cane and urged to take a few steps. Walking is practised each half day, each endeavor being of longer distance than its predecessor. By the fourth day most patients leave the house, and in two weeks they resume business. After the second day massage and passive motion are practised, each séance lasting fifteen minutes, but being gentle enough not to cause pain. The patient wears the adhesive straps for two or three weeks, and if some weakness of the ankle persists, an elastic stocking is worn. I may add that much of the success in this treatment lies in the physician's persuasiveness and tact, and in his ability to arouse the patient's desire and confidence to freely exercise his foot in spite of any discomfort. If pain and swelling are prognosticated before the first exertion is made, the patient will not become unduly alarmed if this contingency takes place.

Dry hot air and static electricity have both been highly extolled as curative agents. Used alone, either will relieve the pain and stiffness for a short time, but the discomfort soon returns, so that repeated treatments have to be submitted to, which are both expensive and annoying. When used with adhesive straps they undoubtedly hasten recovery, but not enough so that any real amount of time is gained.

Immobilization has fallen into disuse, except where a fracture or dislocation is present or very extensive laceration of ligaments and effusion into the joint cavity are manifest. With this method the joint is kept at rest from two to four weeks, many adhesions formed, and in spite of great care ankylosis has resulted in not a few cases.

Chronic sprains are sprains which have either been neglected and untreated, or those which have not improved under existing treatment. They offer interesting study, but they hardly enter into a paper of this kind. They were simply mentioned to fill out the classification.

The advantage of treating a sprain of the ankle with adhesive straps, cold applications and early

ambulatory movements may be briefly summarized as follows, viz.:

First—Swelling and resultant hyperæmia are largely controlled by the firm pressure of the adhesive plaster and cold applications.

Second—Pain is not nearly so acute or of as long duration.

Third—With less pain the patient is more willing to make early efforts in the use of the joint.

Fourth—If the straps become loosened through subsidence of the swelling they can be easily reinforced without removing the whole dressing.

Fifth—Confinement to one's home is of very short duration.

Sixth—Finally the early ambulatory movements greatly lessen the tendency to painful stiffness and adhesions of the joint; while when immobilization methods are used they at times undoubtedly lengthen the convalescence into months of partial disability.

Dr. N. V. Shannon, of Cambridge, Mass., writes:

The object of the first treatment is to relieve pain, and prevent or reduce the swelling. The first treatment consists of rest in the recumbent position, with elevation of the foot on a pillow.

When seen immediately after the accident I apply an elastic bandage, such as rubber or flannel cut on the bias, surrounding the ankle with ice bags. If first seen some hours after the accident or when the ankle is swollen, I apply fomentations of laudanum, one part in hot water four parts after the pain subsides somewhat. I use an evaporating lotion as follows:

R	Ammonii chloridi,	.....	āā 5i;
	Aceti acetici dil.	.....
	Alcoholis,	.....
	Aquæ,	.....	āā 3iv.

M.

Massage, from fifteen to thirty minutes, once or twice a day, followed by the application of a snug elastic bandage and continued elevation of the foot is commenced on the second day, and continued until the swelling has been somewhat reduced. This may take from two or three days to one week, according to the severity of the injury or the promptness of treatment. The object of the later treatment is to get rid of the extravasated blood, and limit the formation of connective tissue to the repair of torn fascia, ligaments, sheaths, or synovial membrane.

When the swelling begins to subside adhesive plaster strips should be applied. I prefer the zinc oxide plaster and use strips of adhesive plaster one inch in width and twelve to eighteen inches in length. The length must be sufficient to extend well over the calf of the leg, but I never make a complete circle of the leg. The first strip is applied beginning just above the ankle on the unaffected side, passing under the heel and up on the affected side, passing along parallel to the tendo Achillis well over the calf. The second strip is placed at right angles to the first. I begin at the base of the toe on either side of the foot, pass around the heel behind and over the other side of the foot to the base of the toe. The third strip is applied in the same manner as the first, overlapping it one half. The fourth strip is applied in the same manner as the second, overlapping it one half. These strips are continued in this manner until the seat of injury is

well covered over. At the point of injury and over this first dressing shorter strips may be applied at an angle to the other strips. Not more than three or four of these shorter strips should be used and they should never make a complete circle of the ankle.

Next I apply a tight roller bandage, either elastic or cotton roller, beginning at the toes and extending to the top of the plaster. This will ensure close adaptation of the plaster and can be removed in twenty-four hours.

Now the patient is ready to walk and by encouragement he will do it, and finding himself progressing well, will continue to walk with ease. In the majority of cases it is necessary to reapply the strips once a week for two or three weeks. When the strips are reapplied the leg and foot should be thoroughly washed with soap and water, followed by alcohol, and massage should be given.

Dr. Paul F. Morf, of Chicago, states:

1. Slight injuries evidenced by slight pain and tenderness I treat as follows: Rest of joint for forty-eight hours with the foot elevated. Hot fomentations are applied and gentle passive movements for thirty minutes instituted three times a day. At the end of this time the patient begins to use the joint, this bringing more blood to the part, and improving nutrition. The joint is bathed thirty minutes, night and morning in water as hot as can be borne, followed by a cold douche for one minute and then massage for thirty minutes.

2. If there has been a severe stretching of ligaments and rupture of some ligamental fibres, evidenced by severe pain, swelling and tenderness, and considerable difficulty in walking, the treatment for the first two days should be as before stated. On the third day the injured limb is then washed and the leg and foot are shaved. An assistant now holds the foot in a position midway between inversion and eversion, simultaneously pushing the astragalus firmly upward. Zinc oxide rubber adhesive plaster strips are torn one inch wide and long enough to extend from tibial tuberosity under the sole, stirrup fashion, to the fibular head. Shorter strips about one foot long and one inch wide are also torn. I apply first a strip to the inner side of the leg in the median line, drawing it tightly over the sole of the foot and upward over the outer surface of the leg in the median line to just below the fibular head. A short strip beginning near the head of the first metatarsal bone is passed snugly behind the heel and over the outer margin of the foot to the head of the fifth metatarsal. A second vertical strip slightly anterior and overlapping the first is applied similarly. A second horizontal strip follows higher and slightly overlapping the first. A third vertical strip is then applied posterior to and slightly overlapping the first, followed by a third horizontal strip. This process is continued until the leg and foot are covered, the horizontal strips becoming progressively shorter and having their ends overlapping at the instep and the ankle, up to a point one inch above the joint. Thereafter a roller bandage is applied and the patient is directed to walk. The strips take all strain off the torn ligaments, partially immobilizing the joint while repair occurs. This repair is enhanced by the use of the joint, thus bringing more blood to the part.

After two weeks the dressing is removed and bathing and massage carried out as in the first class.

3. If there has been a severe stretching and laceration of the ligaments and a contusion of synovial membranes and articular portions of the joint, really a temporary incomplete dislocation, evidenced by severe pain, swelling, tenderness, abnormal mobility, and loss of function, the limb should be elevated and the foot kept in good position by sand bags for two days, hot fomentations and gentle massage hastening the resorption of the swelling. The limb is then washed, shaved, and bandaged in sheet wadding cut in strips four inches wide and applied so the limb is covered from knee to toes by two layers, except at the ankle, where three layers are placed. Over this plaster bandages are applied, forming a light cast from knee to toes, the foot being held in a position described under the second class, while the plaster bandages are applied. This cast remains two weeks, the patient being directed to keep his foot elevated. During the second week he is encouraged to walk with the aid of a cane. At the end of the second week the cast is removed and hot bathing and massage instituted as above.

(To be continued.)

Therapeutical Notes.

Formula for Inveterate Acne.—Lassar's naphthol paste:

R Betanaphtholis, 10 parts;
Sulphuris præcipitat., 50 parts;
Petrolati,
Sapon. viridis, { 20 parts.

M. S.: To be applied for a quarter of an hour to the affected area, then washed off, and the skin powdered.

For Insomnia:

R Paraldehydi, 2 parts;
Aque menthæ pip.,
Aque aurantii florum, { 60 parts;
Syrupi acaciæ, 25 parts.

M. To be taken in two doses, at fifteen minutes' interval, at bed hour.

Journal de médecine, February 4, 1906.

Chloral for Toothache.—Rabaglietti, from personal experience, declares that a fifteen per cent. solution of chloral hydrate in glycerin, if applied on a piece of cotton (which is inserted into the carious tooth), will cause the pain to cease as if by enchantment.—*Journal de médecine, February 4, 1906.*

Lotion for Bromidrosis of the Feet.—A one per cent. solution of chloral hydrate in distilled water is to be thoroughly applied to the feet, and they are wrapped up at night in a compress wet with the same solution. At the termination of a few days of this treatment, the odor disappeared and the small ulcers became healed.—*Journal de médecine, February 4, 1906.*

Ulcerative Stomatitis.—P. Gallois (*Le Bulletin médicale, January 31, 1906*), in the treatment of ulceromembranous stomatitis in infants, formerly used iodoform, but now substitutes thymol iodide (aristol). He reports from this treatment very satisfactory results. M. Danlos, in the ulceromembranous stomatitis of adults, applies chromic acid with success. As this agent is poisonous, it is necessary to rinse the mouth several times after

each cauterization. He does not use it in children.

Treatment to Prevent Recurrence of Boils.—Gaucher (*Journal de médecine*, February 4, 1906) prescribes the following to check furunculosis:

R Acid. borici.....30 parts;
Aque destillatæ.....1000 parts.
M. A tablespoonful of this to be taken in a glass of water during each meal.

The preparation must be well diluted, or it may cause cramps of the stomach. This is continued for one week, and is followed by tar water given in Vichy water. At the end of the second week, sodium arsenate is given for the same period. The treatment may begin with the tar and alkaline water, then the boric acid, and then the sodium arsenate; at the end of the third week the cycle begins again if the patient requires further treatment.

To Prevent Vomiting of Medicine for Tapeworm.—E. Apolant, of Berlin (*Deutsche medizinische Wochenschrift*, No. 44; *Wiener klinische Wochenschrift*, No. 3, 1906), in order to prevent vomiting of remedies given for tapeworm, gives, from a quarter to half an hour previous to their administration, the following to reduce the sensitiveness of the stomach:

R Mentholis, /
Sacchari lact., {ää 0.30.
M. In capsules, for one dose.

By this means, the irritability of the gastric mucous membrane is overcome. Together with this he also allows the customary black coffee, brandy, lemon juice, or peppermint lozenges. Having adopted this course for several years, he finds it almost infallible in preventing the vomiting.

Formulæ for Frostbite:

R Acidi tannici.....2 parts;
Plumbi acetat.....5 parts;
Bals. Peruviani.....3 parts;
Unguenti,90 parts.

M.
R Ung. plumbi acetat.....100 parts;
Adipis lanæ.....50 parts;
Olei camphorat.....30 parts;
Bals. Peruviani.....15 parts;
Ol. bergamottæ.....5 parts.

M.
R Acidi tannici, /
Lycopodii, {ää 15 parts;
Adipis,30 parts.

M.
Zentralblatt für die gesammte Therapie, January, 1906.

R Olei camphorati.....5 parts;
Mentholis,0.06 part;
Glycenti acidi tannici (10 per cent.).....10 parts;
Adipis lanæ hydrosi.....20 parts.
M. To be applied at night.

Therapeutische Monatshefte, November, 1905.

The Ferrous Carbonate as a Dressing for Atonic Ulcers.—Sabourand (*La clinique*, January 5, 1906; *Revue de thérapeutique medico-chirurgique*) uses the ferrous carbonate as a dressing for old ulcers; it can be applied in a fine powder, or in an ointment. It is an excellent cicatrizing agent, and is especially useful in old leg ulcers, the deep ulcers of erythema, and venereal ulcers. The entire cavity of the ulcer is to be filled with the pow-

der, over which is placed a layer of wadding, and the whole confined with a bandage. Every day the surface is to be cleansed with a camel's hair brush, and if crusts adhere, a few drops of fresh oil of sweet almonds are added, so that the surface may be exposed to receive another layer of the powder and dressed as before. This method is said to produce marvelous effects in simple, atonic ulcers. If the patient objects to this dressing, an ointment may be substituted (one to forty in petrolatum), and applied in the same manner. The wound may be cleansed with a piece of absorbent cotton, which has been dipped in oil of sweet almonds.

Treatment of Tetanus.—Campbell P. Howard (*American Journal of the Medical Sciences*, February, 1906) reports nine cases of tetanus, and makes the following observations upon treatment. The first indication is to correct any predisposing condition, such as the diarrhœa, vomiting, pregnancy, etc. Lavage should be practised in the gastric variety with plain water or mild antiseptic. Purges and emetics help; diaphoresis and diuresis should never be omitted. In the form associated with gastrotosis surgical intervention is certainly indicated. In the tetanus of pregnancy, or in any cases associated with thyroid deficiency, remarkable results have been obtained by Bramwell and Gottstein in Europe, and Cabot in America. Negative results have also been reported. For the spasms themselves, absolute rest in bed, cold to the spine, tepid baths, hot packs, opium, bromides, chloral, and other drugs have been tried with little or no result. The administration of chloroform by primary anæsthesia may lessen the severity of the spasm.

Toxic Action of Carbon Disulphide.—A. Vigouroux and G. Collet, at the meeting of the Société medico-psychologique of Paris, held December 18, 1905, reported the case of a degenerate who had suffered with acute delirium as the result of chronic intoxication with carbon disulphide. The patient, a man, thirty-three years of age, had been employed for five months in vulcanizing rubber by means of a mixture of carbon disulphide and sulphur protochloride. The atmosphere in which he worked always contained the vapor of carbon disulphide. He first complained of headache, dyspepsia, constipation, and impotence. Then insomnia with nightmare, and finally delirium, characterized by anxiety, and to this was added hallucinations of vision. On entering the asylum he was also found to have alimentary glycosuria. The authors call attention to the similarity of the forms of delirium in the diverse, chronic intoxications, with those of auto-intoxication due to insufficient excretion of organic origin.—*Archives générales de médecine*, January 10, 1906.

Contribution to the Treatment of Migraine.—V. Klimek (*Medizinische Blätter*, December 21, 1905) reviews the treatment of migraine, which he declares must frequently be medicinal, while at the same time the general condition must not be forgotten and appropriate regimen prescribed. The regulation of the diet, the cessation of overwork, and an excess of all kinds, to-

gether with hydrotherapy, sea water baths, a visit to health resorts, especially in the mountains, are often very useful to the migrainous subject. Electricity and massage also give some aid. In severe cases, Strümpell strongly recommends Carlsbad water for such patients. It is generally known that in migraine the administration of narcotics, and especially morphine, is very badly tolerated. On the other hand, we can give with success quite large doses of potassium bromide, especially in ophthalmic migraine. It is the antipyretics, especially, which are the most frequently used, such as antipyrine, acetanilid, and sodium salicylate. Among others of this group which have been employed is also acetophenetidin. Gurana and caffeine are also very useful. A great advantage is gained by combining several of these in a formula, the proportions of which may be changed to suit individual cases. The following was proposed by Fuchs:

R	Acetphenitidini,	0.50 gramme;
	Caffeine,	0.06 gramme;
	Codeinæ,	0.02 gramme;
	Guaranæ,	0.20 gramme.

M. Ft. Charta. To be taken in one dose.

On account of the slight bitterness due to the codeine, it is suggested that the preparation be put up in compressed tablets. This dose is taken at the onset of the attack of migraine, and may be repeated.

Treatment of Scarlatinal Nephritis by Oil of Turpentine.—The oil of turpentine was prescribed by Pippingsköld in 1868, in scarlatina, and has since been employed with success by many others. It has been held to be especially serviceable in renal complications, and when given in time, was believed to prevent the development of scarlatinal nephritis. Other authors having refused to adopt this treatment precisely because they feared that it might cause irritation of the kidneys, M. S. Yassny (*Prakt. Vrach; La Semaine médicale*, January 24, 1906) has investigated this subject clinically. He found that the fear was groundless, and that in ordinary doses the remedy is inoffensive, even in recent cases of nephritis. He prescribes the rectified oil of turpentine in the daily quantity of fifteen to twenty-five drops, taken in three doses, in milk. The patients used no other remedies and did not have baths. In sixteen out of twenty subjects (of which twelve had hæmorrhagic nephritis), the albuminuria rapidly diminished, until in a variable time, from two to sixteen days, it entirely ceased. In one patient the albumin disappeared at the end of two weeks, but when the turpentine was stopped, the albuminuria immediately returned and continued fifteen days longer. In one case no effect was observed and the albuminuria was still present at the end of six weeks. But in no case did the medicament increase the proportion of albumin. In twelve cases of hæmorrhagic nephritis, eight were rapidly ameliorated, the blood having disappeared from the urine in from two to seven days. In two cases of albuminuria, the administration of the remedy was followed by hæmaturia, lasting several days. It is an open question whether or

not the turpentine provoked the hæmaturia, or whether it was a coincident. However this may be, the author concludes that when used in small doses, this remedy does not irritate the kidneys, even when these are already affected. In the majority of cases of scarlatinal nephritis, it actually favors the rapid cessation of albuminuria and of hæmaturia. It is advisable to continue the remedy for some time after the albumin has entirely disappeared from the urine.

The Administration of Medicine During the Night.—René Laufer (*Bulletin général de thérapeutique*, January 23, 1906) calls attention to the fact that not only are the bodily functions modified at night, but diseases are affected in their course. Thus, some are manifested most frequently at night, like asthma; or may appear both by day and night, but are worse at night, like epilepsy, or painful syphilitic manifestations. Others continue day and night, but are modified and perhaps more acute at night, like articular rheumatism. This pathology of night may be rationally opposed by a nocturnal therapeutics. In rheumatism, for instance, the evolution of the disease progresses steadily during the night as well as the day, and the remedies should likewise be continued. In a case of asthma, which regularly occurred between midnight and three o'clock in the morning, the administration of one gramme of potassium iodide on going to bed prevented the recurrence of the attacks. In a case of nocturnal epilepsy, the bromides were given three times during the day, and also at 11 o'clock at night and about 1 o'clock in the morning (in a little milk). Although previously the patient had had seven or eight attacks a week (two or three during the day, the rest at night), he had during the first week of this treatment no attack in the day and only one at night. In the fourth week there was only one seizure, and after that for four weeks there were no attacks at all. Besides the potassium bromide in doses of 0.50 gramme, three times a day and twice at night, he was given a diet free from sodium chloride, and for the time was kept on a strict milk diet. In cases of acute rheumatism, where the sodium salicylate treatment (3 grammes during the day, in six doses at intervals of two hours and 2 grammes at night, in three doses, at midnight, 3 and 6 o'clock) was given, and they were kept on a milk diet, the cure was obtained in much less time than by the ordinary method. The same principle of treatment is applicable to syphilitic neuralgias, to whooping cough, bronchitis, enteritis, etc. Laufer believes that remedies are more effective at night because absorption is probably more rapid, and elimination on the contrary is less active. Owing to certain conditions, also, it is probable that the toxicity of remedies is greater at night when the stomach and intestines are comparatively empty. The use of an alarm clock enables patients to take the medicines themselves, but some awake spontaneously. The administration of remedies during the night in acute rheumatism was advocated by Huchard, in his *Practice*, a number of years ago, and is now generally followed.

NEW YORK MEDICAL JOURNAL

INCORPORATING THE

**Philadelphia Medical Journal
and The Medical News.***A Weekly Review of Medicine.*

Edited by

FRANK P. FOSTER, M. D.,
and SMITH ELY JELLIFFE, M. D.

Address all business communications to

A. R. ELLIOTT PUBLISHING COMPANY,

Publishers.

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co., or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, MARCH 3, 1906.

THE SCHEME OF WATER METERS FOR NEW YORK.

After many years of quiescence a movement in favor of installing water meters in the residences of New York has lately been revived, both in the State legislature and before the city aldermen. We hope that it will not meet with success. Its avowed object is to check the waste of water which undoubtedly takes place, and that is a praiseworthy motive, but the wisdom of seeking to achieve it in the way proposed seems to us to be very questionable. In the first place, there are weighty economic objections. It has already been pointed out before the aldermen that tenants of the sort that change their abode frequently for the purpose of evading payment of rent would be tempted in many instances to waste water wilfully out of spite toward the landlord, who would have to pay the bill, and that, to protect themselves against the prospective loss, the landlords of tenements would raise the rents, already unconscionably high, thus putting another burden on the poor.

But we as physicians are more directly bound by a sense of duty to urge another objection, one which also chiefly concerns the poor, though not the very poor alone. The facilities for bathing are none too good in this great town of ours, and the dread of big water bills, whether made out directly to tenants or to owners, would certainly deter many good citizens from bathing with sufficient frequency to fulfil the requirements of

health. If our memory serves us, this great objection to water meters was clearly stated and ably brought to bear by the sanitary officials years ago, when, as was suspected, some maker of meters thought to make a fortune at the expense of the people of New York; and we hope that the present Health Department will now urge it upon the attention of the lawmakers. We want no water meters in our houses, no matter what expense may have to be incurred to bring additional supplies of water to the city and to check the underground waste that is now believed to be enormous.

The recent disastrous bursting of a main in the Harlem district in consequence of reckless blasting points to the duty incumbent on our officials of putting a stop to the wantonness of contractors in this matter of blasting, in which many of them seem to think of nothing but their own purposes. Then, too, there is the injury thought to be done to the pipes, great and small, by the electrolytic action of runaway currents from buried wires. Let us find out how much harm, if any, is done in that way, and take measures to stop it. There are many ways of saving water without making it impossible for poor tenants to keep themselves clean.

SOME PROBLEMS OF REGENERATION.

There is no biological subject that is so intimately bound up with the themes of modern medical research as the phenomenon of regeneration. From the view point of surgery alone, not to mention the various phases of normal and pathological cellular proliferation, the restoration or vicarious performance of lost functions, as well as many other enigmas of the healing art, the question of regeneration is one of engrossing practical interest.

It is to the biologist that one must turn for enlightenment on this subject. On Saturday evening, February 17th, the Harvey Society listened to a masterly lecture by Professor T. H. Morgan, of Columbia University, on The Extent and Limitations of the Power to Regenerate in Man and Other Vertebrates. The lecturer confined himself to a discussion of the general aspect of the physiology of regeneration. Of eminent importance is the inquiry why certain animals lack this power. Apparently regeneration is one phase of the general phenomenon of growth. The question now arises, Why does an animal stop growing? It is not because the cells have lost the power of growing, for if the animal is injured, healing occurs. Most cells have a limitless power of growth. One is obliged to con-

ceive of something in the body that serves to restrain or inhibit growth.

The hypothesis has been advanced that the adult size is the stage of equilibrium between the amount of food digested and the amount used up. If this is true, then if the tail or leg of a salamander is cut off, the rest of the body should grow larger. By actual experiment this has been found to be the case. But Professor Morgan is disinclined to accept this result as a proof of the theory, for the increase may depend on a greater amount of reserve material or on a true hypertrophy of the cells. And regeneration does not depend upon a greater surplus of food, for two salamanders whose tails have been amputated, and one fed and the other starved, will reproduce their tails equally well.

It has been established that in an animal capable of regenerating its limbs, the greater the number of parts removed the faster do new ones grow. This would seem to apply the dictum of Pflüger that the cause of every need supplies the means by which that need may be satisfied. Professor Morgan has investigated the rate of regeneration at different levels. If the tail of a fish is cut off at the base, the new part grows faster than if the tail had been cut off near the end. This phenomenon agrees with the normal processes of growth. Thus, in adolescence growth is very rapid. Moreover, during regeneration the growth is the more rapid the nearer the part is to the cut end.

In explanation of the causes of regeneration, a vitalistic theory has been put forth, namely, that there is a formative or completing force residing in the cells. Another hypothesis emphasizes an inhibitory factor in the process of growth, which is limited by the mutual pressures and tensions of the cells. As soon as this pressure is removed the cells grow again. The formative force is only the response of the cells to removal of the pressure of the neighboring cells.

As is well known, the regeneration of parts of the body is more common the lower the place the animal occupies in the scale of life. Not merely simple appendages, but also complex organs, such as the eyes of salamanders, are capable of regeneration. It has been shown also that a part of the body in its regeneration may be formed from a structure from which it does not develop during embryonic life; thus, a new lens may be formed from the iris. Tarnier has succeeded in producing supernumerary extremities in the frog by incising the bud of the posterior limb. In this way he has been able to cause the development of frogs with eight hind legs.

One extremely interesting as well as useful subject of inquiry is that of why, as one ascends the scale of life, the ability to regenerate lost parts diminishes. Some zoologists believe that the lack is due to an increasing complexity of structure. This is not true, for the eye of the salamander is a very complex structure. Weissmann believes that the power of regeneration is acquired by natural selection. Professor Morgan holds that this view is wholly erroneous, for structures which are rarely exposed to injury, such as the eye of the salamander, are capable of regeneration.

If the power of regeneration is related to the power of growth, why is it absent in certain forms? The evidence points to the fact that in a complex animal the different tissues have a different rate of regeneration. Hence they fail to cooperate. The fault lies mostly in the bones, for these are regenerated very slowly. The reason, therefore, why a human being does not reproduce a lost finger resides in this failure of the various tissues to adjust their regenerative capacities to one another. Professor Morgan suggests that it might yet be possible to produce regeneration of lost limbs in the higher animals provided one could find a means of adjusting the rates of regeneration of the various tissues to one another.

THE LISBON CONGRESS.

The Fifteenth International Medical Congress, which will be held in Lisbon from April 19th to April 26th, bids fair to be one of unusual importance, and, although the number in attendance will perhaps be smaller than when the congress has been held in some of the larger capitals, papers will be presented by some of the leading men of the profession. The meetings will be held in the Medical School of Lisbon, a very large and spacious building, and will be under the patronage of the King and Queen of Portugal.

The meetings of the sections will take place in the various halls of the building, besides which there will be others devoted to the comfort of the members. The largest hall of the building will be a general club room, in which the members can read, write, and converse, while two adjoining rooms of large size will be reserved for ladies. On the terrace of the university there will be a buffet, where the physicians can walk about or sit down and have refreshments served at all hours of the day. Everything will be under one roof, and there will be readily accessible all that is needed in a general way. There will be the offices of the president, secretary, and treas-

urer of the congress; a telephone room; a type-writing room; a press room; an information room, where one can find out all the particulars regarding the various routes of travel; halls for showing different apparatus; amphitheatres for lantern exhibitions; a post office and telegraph office; a registration room; a money exchange; and a room where papers, cigars, cigarettes, etc., will be on sale.

The opening exercises will take place in the hall of the Geographical Society, where a colonial exposition will take place during the meeting of the congress, under the auspices of the sections in colonial and naval medicine. There will be a number of addresses delivered each afternoon at the general meeting by distinguished representatives of different countries. Dr. Nicholas Senn will represent the United States; Sir Patrick Manson, England; Professor von Bergmann, Germany; Professor Reclus, France; Professor Neumann, Austria; Professor Jean Tarschanoff, Russia; Professor Azevedo Sodre, Brazil; Dr. José Maria Esquerdo, Spain; and Dr. P. Aaser, Norway. The names of those from the other countries have not as yet been given out.

There will be two large steamers, one from London and the other from Hamburg, that will take the members to Lisbon, and will serve as hotels during the stay there. One of the steamers can accommodate three hundred passengers. The hotel and other accommodations are in the hands of Mr. Manuel Josida Silva, editorial office of the *Anuario Commercial de Portugal*, Lisbon, to whom all communications concerning board and lodging in Lisbon should be addressed. Communications from Americans regarding the scientific part of the congress should be addressed to Dr. Ramon Guiteras, secretary of the American National Committee, 75 West Fifty-fifth Street, New York.

THE TRANSMISSION OF MALTA FEVER.

Malta fever is an infectious disease caused by the *Micrococcus melitensis* and characterized by a prolonged course of febrile periods alternating with periods of apyrexia, also by enlarged spleen, sweats, and rheumatic pains. The disease is prevalent in the island of Malta, where, among the 30,000 men constituting the British garrison, there are about 700 cases every year. The disease is also endemic in several of the coast towns of the Mediterranean, in Hong Kong, in Cuba, and in Bermuda. Several years ago Musser and Sailer (*Philadelphia Medical Journal*, December 31, 1898) reported a case that had originated in Puerto Rico. The diagnosis of the disease is

facilitated by a positive agglutination reaction between the patient's blood serum and a pure culture of the *Micrococcus melitensis*, and is made positive by the recovery of the organism from the patient's blood.

Edward H. Ross (*Journal of Tropical Medicine*, January 15th), who had been on duty in and about the Mediterranean ports for several years, contributes a study of the method of infection in Malta fever which is of interest. He finds that Malta fever is prevalent only in the towns near the coast of subtropical seas. It exists as an endemic all the year, but its incidence is much increased during the hot weather. In Malta the disease is especially prevalent in the hospitals in which cases of the fever have been treated, but it is not strictly confined to the fever wards. It frequently occurs in epidemic form, the cases then invariably appearing one after another, not simultaneously, as if they were caused by a common means acting at the same moment. When, in Malta, a ship is moored in the harbor, a short distance from shore, the disease never occurs except in the cases of men or officers who have recently spent the day or the night on shore or who have just returned from a hospital. If, however, a ship goes into dry dock or is moored alongside a wharf during the summer, an epidemic of Malta fever almost invariably breaks out on board. So far as lay in the power of a surgeon on a cruising man of war, Ross investigated the method of transmission of the disease by direct contact with Malta fever patients, by the clothing of Malta fever patients, by urine-infected dust, by urine-infected water or food, by biting insects, and by transmission from an intermediate host.

He criticises the theory of Zammitt of the transmission from goats to man through the medium of infected milk, and concludes that transmission by the bite of an infected mosquito, although not proved, is the most reasonable hypothesis. The mosquito thought to be the disseminator of the infection is *Acartomyia Zammittii*, an insect which passes its larval stage in concentrated sea water and has been found in every place in the Mediterranean in which Malta fever is known to be endemic. It remains for the author or for one of his colleagues to carry the work on to complete proof.

THE INFLUENCE OF THE VASOMOTOR NERVES ON TRANSUDATIONS.

In 1903 Boddaert reported the observation that after section of the cervical sympathetic nerve or removal of the superior cervical ganglion of the nerve, the subcutaneous injection of fluorescein was followed by a more abundant transuda-

tion into the anterior chamber of the eye of that side than into that of the other side. It became interesting to determine whether this increased activity of transudation was general in the region supplied by the divided nerve, particularly whether it affected the skin. In some varieties of guinea pigs the auricles present a reddish color instead of the more or less deep pigmentation which is usual to them. Such animals are particularly suitable for experiments for the determination of this point. After section of the cervical sympathetic, the subcutaneous injection of fluorescein was followed by rapid coloration of the aqueous humor and of the auricle of the side on which the section had been made. Experiments were then performed in order to determine whether the transudation of biliary pigment would follow the same course. Boddaert reports the results of these experiments in the *Bulletin de l'Académie royale de médecine de Belgique*, xix, 1905, 9, 10. First, the common bile duct was tied, and after the appearance of icterus the sympathetic nerve was cut. In a short time after the section of the nerve the conjunctiva on the side corresponding to the section was much more jaundiced than that on the opposite side, and the yellowness persisted longer. Other experiments of a similar nature appear to throw some light on cases of partial icterus. It appears inadmissible that biliary pigment should accumulate exclusively in one part of the body. But, as one of the experiments showed, the biliary coloring matter may enter the blood in an insufficient amount to color the skin under normal conditions; but jaundice may appear under the influence of a circumscribed vasomotor paralysis; because the vascular transudation becomes more active and the biliary coloring matter is deposited in the superficial layers of the skin. For example, in the course of some change in the brain a certain amount of biliary pigment may enter the blood, but not enough to cause icterus in that half of the body in which the vasomotor innervation remains intact. On the side on which there is vasoconstrictor paralysis, however, increased transudation may occur and a condition of unilateral icterus may develop.

THE BENEFICENCE OF DISEASE.

When the unwilling host of a small but perniciously active colony of streptococci, located upon some external portion of his anatomy, is assured by his friends of its fixed financial value, it is a metaphorical method of asserting that the affliction is not without compensation, and that in the end the result will be beneficial. Samuel D. Gross contended in his lectures that the vul-

gar dread of inflammation getting into a wound was without basis, as wounds could not heal without inflammation. This attitude toward disease in general has in all probability never been more attractively presented and elucidated than in a lecture recently delivered before the Edinburgh Philosophical Institution by Sir Frederick Treves.

His theme was the title of this article. He not only gave convincing illustrations of the protective influence of pathological processes, but also went to the extent of declaring that "if it were not for disease, the whole human race would soon be extinct." While, at the first announcement, this broad statement appears somewhat paradoxical, it is found to be warranted when, on closer examination, it is realized that, in the words of the author, "the processes of disease are aimed not at the destruction of life, but at the saving of it." It therefore appears that "disease is not one of the ills which flesh is heir to, but one of the good gifts, for its aim is protective and beneficent." In inflammation there is manifestly a curative process. Peritonitis is usually a warning of the occurrence of appendicular disease, and is Nature's attempt at cure. Sir Frederick, in a similar way, proceeds to discuss various infectious diseases. A common cold is caused by infection, and its symptoms, in the main, are manifestations of the process of cure, and are so far beneficial, for without them a cold might be a fatal malady. In diphtheria the symptoms are caused by Nature's effort to produce the antitoxine. They can be promptly relieved by supplying the necessary element found in the protective serum taken from the horse.

With regard to cancer, the eminent surgeon asked for a suspension of judgment, and was not prepared as yet to declare it an exception. As yet we know very little about the intimate nature of carcinoma. Formerly the clot in an aneurysm, in the process of organization, was considered to be a cancer, and surgeons proceeded to dissect it out, thus undoing Nature's work in curing the aneurysm. This may appear in the minds of many to be a trifle too optimistic; however, the facts, in the main, support the argument of the distinguished speaker, that disease has a beneficent aspect, which we may contemplate with profit. After all, this is but repeating and enlarging upon the familiar teaching of Hippocrates, or one of his immediate followers, who wrote that "Nature is the physician of disease." The therapeutic efforts of Nature, as exemplified in the human body, must therefore be advantageous in design, if not invariably successful in the outcome.

News Items.

NEW YORK CITY AND STATE.

Changes of Address.—Dr. Hyman Morgenbesser, to 350 East Seventy-eighth Street.

A Reception in Honor of Baron Takaki, of the Japanese Navy, was given by Dr. and Mrs. Jokichi Takamine at the Nippon Club, on Monday evening, February 26th.

The Eastern Medical Society.—The programme for a meeting of the Section in Ophthalmology, Otology, Rhinology and Laryngology, held on Tuesday, February 27th, included the following papers: The Treatment of Trachoma, by Dr. Frank Van Fleet; The Significance of Rhinitis in Children, by Dr. Louis Fischer.

The Brooklyn Pædiatric Society (the Section in Pædiatrics of the Medical Society of the County of Kings.)—The programme for a meeting held on Wednesday, February 28th, included the following titles: The Diathetic Child, by Dr. LeGrand Kerr; Deformities of the Trunk in Children, by Dr. L. C. Ager.

The Associated Alumni of Mount Sinai Hospital.—At the ninth annual reunion held on February 21st, the following officers were elected for the ensuing year: President, Dr. Walter M. Brickner; vice-president, Dr. Percy Fridenberg; secretary, Dr. Robert T. Frank; treasurer, Dr. Andrew Green Foord.

The Buffalo Academy of Medicine.—The following programme has been arranged for a meeting of the Section in Medicine, to be held on Tuesday, March 6th: Therapeutic Treatment of Pneumonia, by Dr. George H. Westinghouse; Report of Twenty-five Cases of Lobar Pneumonia Treated with Antipneumonic Serum, by Dr. G. Tartaro.

The Eastern District Dispensary and Hospital, Brooklyn.—Dr. J. C. Kennedy has been appointed consulting surgeon and Dr. Henry A. Higley has been appointed pathologist, to this institution, to fill the respective vacancies caused by the deaths of Dr. George R. Fowler and Dr. Ezra H. Wilson.

St. Luke's Hospital, Utica, N. Y.—Dr. William H. Beattie, for a number of years house physician at St. Luke's Hospital, has resigned for the purpose of engaging in private practice. Dr. Beattie will be succeeded by Dr. H. N. Squier, who, for the past sixteen months, has served as interne at the Buffalo General Hospital.

The Harvey Society.—The subject of the eleventh lecture in the Harvey course, to be delivered by Professor J. C. Webster, of Rush Medical College, on Saturday evening, March 3rd, is on Modern Views Regarding Placentation. The twelfth lecture of the course will be delivered on the evening of Saturday, March 10th, by Professor Theobald Smith, who will speak on Some Phases of Tuberculosis. All interested are invited to attend these lectures.

Civil Service Examinations for the State and County Service.—The State Civil Service Commission announces examinations to be held on March 17, 1906, for the following positions: Dentist, State Charitable Institutions, fees not exceeding \$40 a month; nurse, Monroe County Hospital, \$240 to \$300 and maintenance; physician, sixth grade, \$900 and maintenance; stenographer, \$600 to \$1,500, open to men only; special agent, Commission in Lunacy, \$5.00 a day. The last day for filing applications is March 12th. Application forms and detailed information may be obtained by addressing the chief examiner of the commission at Albany.

Baron Takaki Gives a Japanese Dinner.—On Sunday evening, February 25th, Baron K. Takaki, who has been in this country to give the Cartwright lectures of the Alumni Association of the College of Physicians and Surgeons, gave a dinner in true Japanese style at the Nippon Club of this city, to a number of the representative members of the profession of New York city. Among those present were the Honorable Stewart L. Woodford, J. R. Seligman, Henry George, Jr., Dr. W. M. Polk, Dr. A. Jacobi, Dr. Samuel Lambert, Dr. J. A. Blake, Dr. J. S. Thacher, Dr. W. P. Northrup, Dr. J. Takamine, Dr. Charles N. Dowd, Dr. Smith Ely Jelliffe, Dr. Simon Flexner, Dr. Emil Mayer, and Dr. W. Gilman Thompson.

The Medical Society of the County of New York.—The programme for a meeting held on Monday evening, February 26th, included the following papers: The Question

of Economy in the Medical Supplies of Hospitals, by Dr. John W. Brannan, president of Bellevue and Allied Hospitals; The Convalescent Branch Hospital and Its Relations to Hospital Reform, by Dr. S. S. Goldwater, superintendent Mount Sinai Hospital; The Relation of the Visiting and House Staff to the Care of Hospital Patients, by Dr. W. Gilman Thompson; The Need of Uniformity in the Details of the Reports of Hospitals, by Professor Frederick A. Cleveland, School of Commerce, New York University; discussion by Dr. E. Eliot Harris, Hon. Robert W. Heberd, Commissioner of Public Charities; Mr. William H. Allen, secretary Committee of Hospital Needs; Dr. C. Irving Fisher, superintendent Presbyterian Hospital; Dr. Arpad G. Gerster, Dr. Walter B. James, and Dr. Francis P. Kinnicutt.

The Need of a Health Commissioner in the Borough of Brooklyn.—The physicians of Brooklyn have felt since consolidation went into effect that this borough is being slighted, and, indeed, almost ignored, in the administration of the Health Department here. The head of the department in Brooklyn is an assistant sanitary superintendent, who has substantially no power, and is compelled to seek instructions on the most trivial details of administration from his superiors in Manhattan. Brooklyn doctors consider this a serious blot on the conduct of an office with which they have most to do, and the Medical Society of the County of Kings at a recent meeting passed the following resolution: "Whereas, Under the present law the Department of Public Health for the Borough of Brooklyn cannot be administered with satisfaction to the medical profession or to the public because of lack of autonomy and direct responsibility, be it Resolved, That the president of the borough be requested to have prepared a bill providing for the appointment of a commissioner of health for the Borough of Brooklyn, who shall be a member of the Board of Health in the City of New York, and shall have all the powers and duties with regard to the Borough of Brooklyn that the commissioner of health now has."

Reintroduction of the Osteopathic Bill.—The attention of the profession in New York State is called to the bill entitled "An Act Regulating the Practice of Osteopathy in the State of New York." This bill authorizes osteopaths to treat all diseases of the human body by the osteopathic method, and exempts them from the educational qualifications demanded by the act governing the right to practise medicine in this State by permitting osteopaths recommended by the State Osteopathic Board to be registered and to receive a license without an examination. *Section 6 of this bill states that:* "Any person, who at the time of the passage of this act shall be actually engaged in the practice of osteopathy in this State, and who is a graduate in good standing of a regularly conducted school of osteopathy within the United States requiring a course of two years or longer, with actual attendance of at least twenty months, and who shall be recommended to the Regents by the State Board of Osteopathic Examiners, shall upon application and payment of twenty-five dollars (\$25.00), without examination, be granted a license to practise osteopathy, provided application for such license be made within six months after the passage of this act." *Osteopathy as defined in the bill means* "That science or system of healing which treats diseases of the human body by manual therapeutics for the stimulation of the remedial forces within the body itself, for the correction of misplaced tissue, and the removal of obstructions or interferences with the fluids of the body, all without the internal administration of drugs or medicines."

The New York Academy of Medicine.—The following was the order for a meeting held on Thursday evening, March 1st, under the auspices of the *Section in Laryngology and Rhinology*: Resolutions Relative to the Smoke Nuisance. The Upper Air Tract as Affected by Influenza. Lantern Slides of Sections of the Nose and Accessory Sinuses, by Dr. Lewis A. Coffin; Paper: *Ætiology and Bacteriology*, by Dr. William H. Park; Paper: *General Considerations, Symptoms, and Treatment*, by Dr. Clarence C. Rice. General discussion by Dr. L. Emmet Holt, Dr. Henry L. Swain, Dr. Cornelius G. Coakley, Dr. James E. Newcomb, and others.

At a meeting of the academy to be held on Thursday evening, March 29th, there is to be a symposium on the training of nurses, arranged as follows: The Organization and Control of Training Schools, by Mr. George P. Ludlam, superintendent of the New York Hospital; What Nurses

Should be Taught, by Miss Mary A. Samuels, superintendent of the Roosevelt Hospital Training School for Nurses; The Overtrained Nurse, by Dr. W. Gilman Thompson; The Trained Nurse and Medicine, by Dr. A. A. Smith; The Trained Nurse and Surgery, by Dr. Robert Abbe. To be followed by a general discussion by Dr. W. P. Northrup. Dr. Walter B. James, Dr. Henry P. Loomis, and others.

At a meeting of the *Section in Surgery*, held on the evening of Friday, March 2nd, the following order was presented: Presentation of Patients; Obstruction of the ileocolic Valve and Appendicitis from Ulcerations of the Caput Coli and Adjacent Portion of the Ileum. Resection, by Dr. Walter M. Brickner; Stricture of Esophagus, Showing Good Results Three Years After Operation, by Dr. Charles R. L. Putnam; Resection of the Stomach, Performed Fourteen Months Ago, for Carcinoma, by Dr. Franz Torek; Case Illustrating the Combined Operation for Appendicitis and Inguinal Hernia, by Dr. Franz Torek; Papers: (a) The Contagiousness of Gumma, by Dr. Charles M. Williams; (b) A New Form of Intestinal Obstruction, with a Review of the Method for Preventing a Recurrence of a Volvulus of the Sigmoid Flexure, by Dr. A. V. Moschowitz; Presentation of specimens: Specimens Resected from Above Given Case of Intestinal Obstruction, by Dr. Walter M. Brickner; Congenital Alteration of the Esophagus, with Esophagotracheal Fistula, by Dr. Charles R. L. Putnam.

The *Section in Pediatrics* will hold a meeting on Thursday evening, March 8th, with the following order: Lipomatosus Universalis in an Infant of Eleven Weeks, by Dr. Jacob Sobel; Rhachitis in a Child of Eleven Years, by Dr. Herman Schwartz; Report of a Case of Hypertrophic Pyloric Stenosis. Operation. Exhibition of Specimen, by Dr. Louis Fischer, and Dr. Arnold Sturmdorf; Paper: Circumscribed Edema, by Dr. F. S. Meara.

The *Section in Otolaryngology* will meet on Thursday evening, March 8th; the following programme has been arranged for the meeting: Presentation of instruments: A New Eustachian Sound, by Dr. Sidney Yankauer; Presentation of Cases: A Case Presenting Vegetating Syphilides of Both Auditory Canals, with Other Facial Manifestations, by Dr. A. B. Duel; Paper: The Present Status of the Diagnosis and Treatment of Otitic Sinus Thrombosis, by Dr. Arnold Knapp. Discussion by Dr. I. Kipp, of Newark; Dr. F. M. Wilson, of Bridgeport; Dr. E. Libman, Dr. T. R. Pooley, Dr. Gorham Bacon, Dr. J. F. McKernon, Dr. Felix Cohn, Dr. A. B. Duel, Dr. T. Passmore Berens, Dr. J. D. Richards and others.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending February 24, 1906:

	February 17.		February 24.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	1,636	34	1,674	37
Diphtheria and croup	341	77	371	62
Scarlet fever	241	8	198	11
Smallpox	..	..	1	..
Chickenpox	162	..	100	1
Tuberculosis	373	167	328	176
Typhoid fever	22	9	30	10
Cerebrospinal meningitis	15	20	30	21
	2,765	315	2,732	318

Society Meetings for the Coming Week:

MONDAY, March 5th.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association (annual); Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

TUESDAY, March 6th.—New York Neurological Society; Buffalo Academy of Medicine; Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, March 7th.—New York Academy of Medicine (Section in Public Health); Society of Alumni

of Bellevue Hospital; Harlem Medical Association of the City of New York; New York Genitourinary Society; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, March 8th.—New York Academy of Medicine (Sections in Pediatrics and Otolaryngology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, March 9th.—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn, N. Y.; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, March 10th.—Obstetrical Society of Boston (private).

PHILADELPHIA AND THE MIDDLE STATES

Charitable Bequests.—By the will of the Rev. Bernard A. Conway, St. Joseph's Orphan Asylum, Philadelphia, receives \$200.

Philadelphia Personal.—Baron Kanehiro Takaki, Surgeon General of the Japanese Navy, addressed the students of the Medical Department of the University of Pennsylvania, on February 23rd, and the students of the Jefferson Medical College, on February 24th. Dr. W. W. Keen gave a luncheon in honor of Baron Takaki on February 24th, and he was the guest of Dr. S. Weir Mitchell at dinner on the same day.

Medical Alumni Society of the University of Pennsylvania.—On the evening of February 21st the Alumni Society of the Medical Department of the University of Pennsylvania assembled at the Bellevue-Stratford Hotel at a dinner of two hundred and fifty covers. Toasts were responded to by the Provost of the University, Mr. C. C. Harrison; Dr. S. Weir Mitchell, Baron Takaki, Dr. George A. Piërsol, who responded to "The Faculty," Dr. George W. Guthrie, who responded to the "Wyoming Valley Alumni," and Dr. Daniel M. Hoyt, who responded to the "Junior Alumni."

Scientific Society Meetings in Philadelphia for the Week Ending March 10, 1906.—Monday, March 5th, Philadelphia Academy of Surgery; Biological and Microscopical Section, Academy of Natural Sciences; West Philadelphia Medical Association; Northwestern Medical Society. Tuesday, March 6th, Academy of Natural Sciences; Philadelphia Medical Examiners' Association. Wednesday, March 7th, College of Physicians; Association of Clinical Assistants of Wills Hospital. Thursday, March 8th, Section Meeting, Franklin Institute; Pathological Society. Friday, March 9th, Northern Medical Association.

The Health of Philadelphia.—During the week ending February 17, 1906, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever	1	0
Typhoid fever	129	37
Scarlet fever	37	1
Chickenpox	51	0
Diphtheria	78	21
Cerebrospinal meningitis	7	4
Measles	725	14
Whooping cough	37	5
Tuberculosis of the lungs	152	81
Pneumonia	160	94
Erysipelas	20	8
Trachoma	1	0
Anthrax	1	0
Mumps	16	0
Cancer	14	14

The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 3; puerperal fever, 2; dysentery, 1; diarrhoea and enteritis under two years of age, 22. The total deaths numbered 612, in an estimated population of 1,469,126, corresponding to an annual death rate of 21.66 in 1,000 population. The total infant mortality was 130; under one year of age, 86; between one and two years of age, 44. There were 36 still births, 17 males and 19 females. The temperatures were moderate.

Philadelphia's Water Supply.—The problem of a pure water supply for a city of a million and a half inhabitants, is not capable of solution off-hand. The water supply of Philadelphia has been unsuitable for years, and the lapse of time has made an unsanitary stream still more unsanitary as a source of water for drinking purposes. The beginning of work on the various filter plants for the city's water supply was looked on as a step which would rapidly lead to the correction of a serious source of mortality. The recent political developments which apparently uncovered evidences of unlawful methods of awarding and fulfilling the contracts has been followed by a period of inactivity which indefinitely postpones the completion of the plant and the delivery of filtered water. In the meantime the cases of typhoid fever reported to the Bureau of Health number two to three hundred a week.

BOSTON AND NEW ENGLAND.

The Lawrence (Mass.) Medical Club.—The regular monthly meeting of the club was held on Monday evening, February 26th, with Dr. G. W. Dow chairman of the evening. Dr. J. F. Burnham read a paper on the Medical Inspection of School Children.

The Bristol (Conn.) Medical Society.—At a meeting of the physicians of Bristol, on Tuesday, February 13th, an organization was effected and the following officers were chosen: President, Dr. W. W. Horton; vice-president, Dr. G. S. Hull; secretary and treasurer, Dr. A. S. Brackett; censors, Dr. H. D. Brennan, Dr. F. W. Deichman, and Dr. W. M. Curtiss.

Personal.—Dr. William R. Brinckerhoff, of the Harvard Medical School, has received special notice of his appointment as director of the United States Government Leprosy Research Hospital, which will be established in the leper settlement in the Hawaiian Islands. He will leave Boston in a few days to take up the planning of the hospital plant and the selection of his staff.

The White River (Vt.) Medical Association.—The programme for a meeting held at White River Junction on Thursday, March 1st, included the following subjects: Infective Osteomyelitis, by Dr. Perry Bartlett; Some Thoughts on Medical Education, by Dr. William T. Smith; a general discussion on the subject of Uniformity in Charges for Medical Service, to be opened by the president, Dr. C. B. Doane, followed by Dr. Goss, Dr. Barrett, Dr. Jackson, Dr. Bogardus, and others.

The Mortality of Boston.—The number of deaths reported to the Board of Health for the week ending February 17th was 217, against 223 the corresponding week last year, showing a decrease of 6 deaths, and making the death rate for the week 19.02. The number of cases and deaths from infectious diseases was as follows: Diphtheria, 46 cases, 4 deaths; scarlatina, 31 cases, no deaths; typhoid fever, 8 cases, 2 deaths; measles, 169 cases, 3 deaths; tuberculosis, 32 cases, 26 deaths; smallpox, no cases, no deaths. The deaths from pneumonia were 36; whooping cough none; heart disease 16; bronchitis 8; marasmus 2. There were 15 deaths from violent causes. The number of children who died under one year of age was 39; under five years of age 61; the persons over sixty years of age 44; deaths in public institutions 70.

BALTIMORE AND THE SOUTH.

The Richmond (Va.) Academy of Medicine and Surgery.—At a meeting of the academy, held on Tuesday, February 27th, Dr. E. C. Levy, city bacteriologist, was to explain the working of his department. The State license tax on physicians was also to be discussed.

Quarantine Against Cuba and Central American Ports.—The Louisiana Board of Health on February 23rd adopted quarantine regulations and decided that the restrictions against Cuba and the Central American ports should become effective on March 13th.

The Piedmont (Va.) Medical Society met in annual session at Culpeper, on Saturday, February 17th, under the presidency of Dr. W. J. Strothers, of Culpeper. Dr. R. M. Slaughter, of Alexandria, Va., read a paper on The Treatment of Appendicitis, which was followed by general discussion.

The Floyd (Ga.) County Medical Society.—The programme for a meeting held at Rome on Saturday, February 24th, consisted of a symposium on La Grippe, arranged as

follows: Synonyms and History, by Dr. Turner, of Lindale; Aetiology and Pathology, by Dr. Isaac Sewell, of Cave Spring; Symptoms, by Dr. L. P. Hammond, of Rome; Treatment, by Dr. Ballenger, of Armuchee.

The Gibson (Tenn.) County Medical Society met at Trenton, Tenn., on Tuesday, February 20th. Dr. Sidney Thompson, of Humboldt, presided. Papers were read by Dr. T. J. Happel, on Rheumatism, and Dr. B. T. Bennett, of Trenton, on Post Partum Hemorrhage. Interesting cases were reported by Dr. D. A. Walker, Dr. Happel, and Dr. Faucett, of Trenton; Dr. Tyree, of Center; and Dr. B. D. Caldwell, of Milan. The next meeting of the association will be held at Milan.

The Tri-State Medical Association of Virginia and the Carolinas.—The annual meeting of this association was held at White Stone Springs, Spartanburg, South Carolina, on Tuesday and Wednesday, February 27 and 28, 1906. The programme, as published, comprising about fifty titles, was unusually attractive and interesting. The special subject for discussion was Rheumatism, in which the appointed leaders were: Dr. J. P. Munroe, Davidson, N. C.; Dr. Frank McP. Lander, Williamston, S. C.; Dr. Julian H. Allen, Spartanburg, S. C.; and Dr. Virginius W. Harrison, Richmond, Va.

The Virginia License Tax on Physicians.—In our issue for November 25, 1905, the statement was made that the State of Virginia was one of only three States that has a tax on physicians, and Richmond was one of the few cities that has a special tax on medical practitioners. A committee appointed by the Richmond Academy of Medicine and Surgery has been striving to have the city remove the special tax. At a meeting of the Richmond board of aldermen, held on February 13th, the report was brought up, and after a vigorous discussion an ordinance exempting physicians from the special tax was passed.

The Board of Medical Supervisors of the District of Columbia has reported to the commissioners the results of the January examination of applicants for licenses to practice medicine and to practice midwifery in the District of Columbia as follows: Licensed to practice medicine—Dr. Rozier C. Baily, Dr. R. C. Coburn, Jr., Dr. Raymond A. Fisher, Dr. Edmund T. M. Franklin, Dr. Chester C. Groff, Dr. Howard Hume, Dr. James E. Johnson, Dr. William H. Littlepage, Dr. Irwin H. McConnell, Dr. Michael J. Raedy, Dr. John A. Stutz, Dr. Robert Y. Sullivan. Licensed to practice midwifery—Mrs. Lulah Hunter-Pafflow, Mrs. Camille L. Owens, Mrs. Eva H. Smith, Miss Olivia Tallaferro.

To Reorganize the Medical Service of the Virginia Volunteers.—On February 23rd a bill was introduced in the Virginia legislature to reorganize the medical corps of the Virginia State militia. The bill provides that the medical department shall consist of a medical corps, a hospital corps, and such trained nurses, clerks, and other employees as may be allowed by law. The medical corps shall consist of a chief surgeon, with the rank of colonel, for each organized division, or the necessary number of troops therefor; a brigade surgeon, with the rank of lieutenant colonel, for each organized brigade, or the necessary number of troops therefor, and the necessary surgeons to perform the medical services for the State, as is provided for at length in the bill. The bill is modelled after the laws regulating the medical department of the United States Army.

The New Roper Hospital in Charleston, S. C., was dedicated on Monday, February 19th, and turned over to the Medical Society of South Carolina, which society, under the terms of the will of Thomas Roper, was appointed trustee of the Roper Fund in 1845. The work of building the hospital was begun in May, 1905, by the demolition of the old city hospital, that was abandoned in 1886. The new hospital occupies the site of the old one and in every particular compares favorably with any like institution in the South. Incident to the dedication ceremonies addresses were made by Dr. J. Somers Buist, ex-president of the State Medical Society; Dr. W. Peyre Porcher, who related the history of the Roper Fund; R. G. Rhett, mayor of Charleston; and Dr. R. S. Cathcart, chairman of the building committee. The hospital is intended for the sick poor, without regard to complexion, religion, or nationality.

The Mortality of Baltimore.—The report of the health department for the week ending February 17th, shows a total of 217 deaths, as compared with 216 the corresponding

week last year, 231 in 1904, and 210 in 1903. The annual death rate in a thousand of population was: Whole, 19.48; white, 16.15; colored, 37.23. Principal causes of death were:

Typhoid fever	2	Pneumonia	49
Scarlet fever	1	Diarrhea	3
Whooping cough	3	Bright's disease	16
Indigestion	2	Congenital debility	7
Consumption	30	Lack of care	5
Cancer	11	Old age	1
Apoplexy	7	Suicides	3
Heart diseases	13	Accidents, etc	12
Bronchitis	5		

The following numbers of cases of infectious diseases were reported, as compared with the corresponding week of last year:

	1905.	1906.		1905.	1906.
Smallpox	4	4	Mumps	2	3
Diphtheria	14	16	Whooping cough	18	15
Scarlet fever	15	9	Chickenpox	6	4
Typhoid fever	4	6	Consumption	7	16
Measles	12	4			

CHICAGO AND THE WEST.

The Columbus (O.) Academy of Medicine.—The programme for a meeting held on Monday, February 19th, included the following titles: Some Old Medicines, by Dr. Starling Loving; discussion by Dr. D. M. Kinsman, Dr. L. Woodruff, Dr. E. B. Fullerton, and Dr. J. H. J. Upham; Direct Inspection of the Oesophagus and Bronchial Tubes, by Dr. F. L. Stillman; discussion by Dr. J. E. Brown, Dr. Whitaker, Dr. J. F. Baldwin, Dr. H. M. Moore, and Dr. W. K. Rogers.

The Chicago Neurological Society.—The programme for a meeting held on Tuesday evening, February 27th, included the following: A Case of Psychosis Resulting from Illuminating Gas Asphyxiation, presented by Dr. Brown; Cases (a) Superior Tabes and (b) Tabes with Hemiplegia and Aortic Insufficiency, presented by Dr. Julius Grinker; A Case of Toxic Amblyopia, presented by Dr. D'Orsay Hecht; demonstration of a brain from a case of acromegaly, by Dr. Sydney Kirk.

Statement of Mortality in Chicago for the Week Ending February 17, 1906, compared with the preceding week and with the corresponding week of 1905. Death rates computed on United States Census Bureau's midyear populations—2,049,185 for 1906 and 1,990,750 for 1905:

	Feb. 17, 1906.	Feb. 10, 1906.	Feb. 18, 1905.
Total deaths, all causes	527	566	630
Annual death rate in 1,000	13.41	14.34	16.50
Sexes—			
Males	301	324	351
Females	226	242	279
Ages—			
Under 1 year of age	108	122	149
Between 1 and 5 years of age	40	54	64
Between 5 and 20 years of age	35	36	27
Between 20 and 60 years of age	243	236	274
Over 60 years of age	101	118	116
Important causes of death—			
Apoplexy	18	14	15
Bright's disease	29	39	36
Bronchitis	11	21	35
Consumption	72	60	73
Cancer	23	31	21
Convulsions	15	11	20
Diphtheria	10	11	6
Heart diseases	49	42	45
Influenza	2	3	8
Intestinal diseases, acute	29	27	25
Measles	0	1	1
Nervous diseases	26	19	27
Pneumonia	80	118	136
Scarlet fever	13	7	3
Smallpox	0	0	4
Suicide	10	7	10
Typhoid fever	4	4	2
Violence (other than suicide)	27	29	24
Whooping cough	2	0	3
All other causes	107	122	136

For the first seventeen days of the current month the rate is 13.97 in a thousand of population. The average February rate of the previous decade was 16.59, or 18 per cent. higher. The 527 deaths reported during the week just closed represent a rate of 13.41 in a thousand. The average rate of June—one of the most healthful months of the year—was 13.01 during the last decade, 1896-1905.

GENERAL.

The United States Civil Service Commission announces an examination on March 21 and 22, 1906, to secure eligibles from which to make certification to fill vacancies as they may occur in the position of copyist medical clerk (male), at \$900 per annum, in the Bureau of Pensions. Age limit,

20 to 35 years, on the date of the examination. The department, however, desires, as far as practicable, to appoint persons to these positions who are between the ages of 25 and 30 years. The examination will consist of the subjects mentioned below, weighted as indicated. Subjects: (1) Penmanship (the handwriting of the competitor in the subject of letter writing will be considered with special reference to the elements of legibility, rapidity, neatness, general appearance, etc.), weight 10; (2) Letter writing (a letter of not less than 150 words on some subject of general interest. Competitors will be permitted to select one of two subjects given), weight 5; (3) Copying from rough draft (the writing of a smooth copy of rough draft manuscript, including the correction of all errors of spelling, capitalization, syntax, etc.), weight 10; (4) Anatomy and physiology, weight 15; (5) Diagnosis, weight 20; (6) General and special pathology, weight 20; (7) Surgery and surgical pathology, weight 20; total 100. Only male graduates of recognized medical schools may be examined, as this examination is held to establish a register of eligibles with a knowledge of medicine. This examination is open to all citizens of the United States who comply with the requirements. Applicants should at once apply either to the United States Civil Service Commission, Washington, D. C., for application form 1312 and for information concerning places at which the examination will be held. No application will be accepted unless properly executed and filed with the commission at Washington. In applying for this examination the title Medical Clerk (male) should be used in the application. As examination papers are shipped direct from the commission to the places of examination, it is necessary that applications be received in ample time to arrange for the examination desired at the place indicated by the applicant. The commission will therefore arrange to examine any applicant whose application is received in time to permit the shipment of the necessary papers. Issued February 8, 1906.

The Fifteenth International Medical Congress.—The arrangements of the American National Committee for the International Medical Congress have now been fully made. The gentlemen who have planned to present papers at the congress should at once send abstracts of their papers to the secretary-general of the congress, Dr. Miguel Bombarda. These abstracts should be very short, and should simply outline the scope of the paper. The official delegates from this country have been appointed by the Secretary of State, the Hon. Elihu Root, and are as follows: Dr. L. S. McMurtry, Louisville; Dr. John H. Musser, Philadelphia; Dr. Frank Billings, Chicago; Dr. W. W. Keen, Philadelphia; Dr. Nicholas Senn, Chicago; Dr. F. C. Shattuck, Boston; Dr. R. Matas, New Orleans; Dr. Albert Vander Veer, Albany; Dr. Walter G. Chase, Boston; Dr. E. DeWitt Connell, Portland, Oregon; Dr. Ramon Guiteras, New York city. At the congress an orator will represent each country in delivering an address or oration before the assembled sections of the meeting. Dr. Nicholas Senn will represent this country as orator, and will deliver an address on The International Study of Carcinoma. Information regarding the scientific part of the congress can be obtained by addressing the secretary of the American Committee, Dr. Ramon Guiteras, 75 West Fifty-fifth Street, New York. Information concerning transportation to and from the congress can be obtained from Dr. Charles Wood Fassett, St. Joseph, Mo., who is in charge of the American party. The announcement is made that the organization of the American party to the congress is nearly complete, and hotel reservations in Lisbon will be closed in a few days. Those who contemplate joining the party should send in their names within the next ten days in order to insure good hotel reservations. Those who are familiar with hotel conditions in Portugal will appreciate the importance of early action. The American party will sail from New York on April 7, on the North German Lloyd steamship *Koenig Albert*. The fare, including all expenses, will be \$300 for 33 days. Members desiring to remain longer in Europe or to return by diverse routes, can have all arrangements made to suit their pleasure, at reasonable rates. Reservation for going passage should be made at once, however, and details for return trip can be arranged later. Reservations and itinerary may be obtained through Dr. Charles Wood Fassett, St. Joseph, Mo. Queen Amelie, of Portugal, who is a Doctor of Medicine, will be honorary president of the congress, which convenes in Lisbon on April 19th.

Pith of Current Literature.

AMERICAN MEDICINE.

February 21, 1906.

1. Clinical Observations in Exophthalmic Goitre,
By GEORGE DOCK.
2. A Case of Neurasthenia as Treated by Two General
Physicians, One Homœopath, One Quack, One Osteo-
path, One Pregnancy, Three Ophthalmic Surgeons,
Two Gynecologists, One Diagnostician, One Neu-
rologist, One Resident Sanatorium Physician, and
One Refractionist,
By GEORGE M. GOULD.
3. The Uses and Abuses of the Free Dispensary,
By R. OLIVER KEVIN.
4. The Relation of Acid Fermentation in the Stomach to
Neurasthenia,
By J. WIRT ROBINSON.
5. Bacillus Chlorhydrici,
By E. PALIER.
6. The Sanatorium Treatment of Tuberculosis,
By GEORGE B. KAUF.

1. **Clinical Observations in Exophthalmic Goitre.**—Dock reports his observations on 32 patients, 29 female, 3 male. The predisposing causes could rarely be discovered. In 12, previous diseases or nervous shock were noted a short time before the characteristic symptoms. In these patients goitre was the first symptom, but in 12 others there was a goitre observed from 3 to 37 years before the other symptoms came on. The thyroid gland was enlarged in all patients. Observations on the blood pressure showed striking differences. Eye symptoms were absent in only three patients. Emaciation was a marked and striking symptom. Diminution of hydrochloric acid in the stomach was observed in a number of patients, but hypermotility was often associated with this. Two of the patients died; one from complicating disease, the other with acute symptoms. Regarding treatment, rest is considered most important, with symptomatic treatment. X rays and surgical treatment are recommended.

5. **Bacillus Chlorhydrici.**—Palier describes in detail under this name a new microbe which he isolated from the human stomach and cultivated. It may be found in hyperchlorhydria and in chlorhydria, but not in hypochlorhydria, and hence its name. It is a small, slender, motile, Gram negative bacillus, and is aerobic. Its isolation is very difficult.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

February 22, 1906.

1. John Hunter, 1728 to 1793,
By JAMES G. MUMFORD.
2. Stenosis of the Pylorus in Infancy. The Report of a
Second Case Successfully Operated Upon. Remarks,
By CHARLES L. SCUDDER.
3. The Home Sanatorium Treatment of Consumption,
By JOSEPH H. PRATT.
4. Cold Fresh Air Treatment of Pneumonia. A Case,
By W. P. NORTHRUP.

2. **Stenosis of the Pylorus in Infancy. The Report of a Second Case Successfully Operated Upon.**—Scudder describes an operation which he performed successfully upon an infant, twenty-four days of age, for stenosis of the pylorus. The author continues in saying that the parts to be operated upon are very tiny, as compared with the adult anatomy. Very delicate manipulation is necessary, and it is safer to operate if especially light instruments are employed, the ordinary adult instruments being clumsy. He then gives his procedure of preparing the infant for operation, and states that complete anæsthesia is necessary. The incision should be made large enough to allow of easy access to the parts sought, with a minimum of trauma to the wound edges, and a delicate clamp is very necessary. After operation skilled feeding is essential.

3. **The Home Sanatorium Treatment of Consumption.**—Pratt reports his results with the treatment of consumption by out of door home living. All of the patients were poor, so poor that none could afford even the \$4.00 per week charged at the State sanatorium.

Every patient had to promise to give up all work, to live the out of door life, and to obey all the rules. If the patient lived in a flat, which did not have balcony, piazza, yard, or roof available, he had to move to a tenement that would enable him to spend the entire day and night out of doors. Tuberculin was used in a number of cases with apparent benefit. Pharmacotherapy was rarely employed, except for special conditions, such as constipation or diarrhœa. In a few instances creosote and compound tincture of gentian were prescribed, while the hydrotherapeutical procedures consisted chiefly of Priesnitz's chest compresses and full tub baths. Of nine patients, under observation for three months, all but one showed a gain in weight, in five the disease was arrested. Once a month the lungs and sputum were reexamined and the patients were daily visited by the nurse.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

February 21, 1906.

1. The Physiological and Legal Status of the Fœtus in Utero,
By W. H. SANDERS.
2. Studies in Röntgen Ray Diagnosis of Chest Diseases,
By JAMES E. TALLEY and WILLIAM S. NEWCOMET.
3. The Effects of Osmic Acid Injections,
By JOSEPH RILUS EASTMAN.
4. Some Studies in Metabolism of Cancer Patients as Compared with Normal Individuals,
By H. H. GLOSSER and W. S. FRISBIE.
5. Congenital Coxa Vara,
By HENRY O. FEISS.
6. Morphological and Histogenetic Characteristics of Endothelial Tumors,
By F. ROBERT ZEIT.
7. The Use of Sheet Paraffin in Lesions of the Nose and Eye,
By E. MORAWECK and GAYLORD C. HALL.
8. The Medical Department of the Army and the Advantages it Offers to the Young Practitioner,
By PHILIP T. HARVEY.

1. **The Physiological and Legal Status of the Fœtus in Utero.**—Sanders, thinking that the beginning of life should be dated at conception and not at birth offers the following propositions: 1. The conjunction of male and female germs constitutes, from a scientific standpoint, birth. 2. The term conception should be abolished and that of birth substituted therefor. 3. In dealing with all stages of pregnancy, even the earliest, physicians should recognize the extreme gravity of the condition, and should never condemn to death a fœtus, however young, without the maturest consideration, and without calling to their aid the highest professional authority within reach; in a word, without carrying the case to the nearest and wisest medical supreme court accessible. 4. The principles herein contended for should be impressed on the members of the profession, taught to medical students and promulgated widely among the people. 5. Medical men should interest themselves to see that the statutes of their respective States are ample for the protection of the fœtus in utero.

3. **The Effects of Osmic Acid Injections.**—Eastman, after reviewing the literature of the use of osmic acid injections in the treatment of neuralgia, narrates his own experience with it. The injection of ten drops of a two per cent. solution, freshly made, into sensory nerve trunks is safe, although the likelihood of irritation of the kidney should be remembered. Immediate relief should not always be expected, relief coming in from one to two weeks. In addition to injection, the stretching of the nerve trunk supplements the action of the acid. The author observed no changes in the nerve tissue. But the injections are uncertain in effect; a large proportion of cases of neuralgia will be relieved for months by the injections.

4. **Some Studies in Metabolism of Cancer Patients as Compared with Normal Individuals.**—Glosser and Frisbie found that in a normal individual, proteid starvation was followed by a loss of nitrogen while the chlorid equilibrium was maintained. In cancer patients

the nitrogen loss showed considerable variations, explainable to some extent by other factors than the existence of the tumor. While a healthy person could assimilate enormous quantities of chlorid and strike a balance in from twenty-four to forty-eight hours, cancer patients showed œdema when chlorid consumption was increased, the kidneys being unable to excrete the excess. Their experiments showed the presence in the system of toxic substances, capable of interfering to a certain extent with motive processes. These toxic bodies are not proved to be specific cancer poisons, but may be suboxidized nitrogenous products.

5. **Congenital Coxa Vara.**—Feiss concludes from his observations in a case of a child, three years of age, that congenital coxa vara is usually associated with defects or deformities of other parts, commonly with defect of the femur and with deformities of the lower limbs. It may be intrauterine in its strictest sense, it may be the result of an intrauterine infection, or it may be combined with congenital rachitic deformities. At least some of the strictly intrauterine cases are associated with peculiar positions of the thighs in utero, that is, adduction of the thigh in question. This peculiar position of the joint might explain a fixed deformity in the later developing hip joint, if we may assume that the proximal end retains its relative position to the acetabulum after birth.

7. **The Use of Sheet Paraffin in Lesions of the Nose and Eye.**—Moraweck and Hall recommend the use of splints made of dentist's sheet paraffin and wax in intranasal operations, as after cautery work, submucous resections of the septum, turbinectomy, in septal deformities, spurs and ridges. In eye work the authors use this paraffin wax in extensive lesions of the conjunctiva, as in burns, and where adhesions are threatened, or after operations for symblepharon.

8. **The Medical Department of the Army and the Advantages It Offers to the Young Practitioner.**—Harvey, in his capacity as assistant surgeon general, points out the advantages the army medical service offers to the young practitioner. He enumerates the freedom from business cares, the opportunities for special work, and the social advantages. The somewhat unsatisfactory conditions as regards promotion that have existed, are almost certain, he states, to be changed at an early date and the chances of rising in the service will be much improved.

MEDICAL RECORD

February 24, 1906.

1. Some Problems in the Treatment of Pneumonia, By EGBERT LE FEVRE.
2. The Bier Treatment of Hyperæmia, By MAX BREUER.
3. Chronic and Periodic Vomiting, By DUDLEY ROBERTS.
4. The Ætiology of Eczema, By JAMES C. MCGUIRE.
5. A Few Suggestions in Reference to Consumption, By L. BARKAN.

1. **Some Problems in the Treatment of Pneumonia.**—Le Fevre says that the toxæmia of the pneumococcus infection must be considered the chief factor in causing the symptoms of the disease. Theoretically, this is conceded by nearly everybody, but, therapeutically, it is ignored in practice, where still the old principles governing the treatment are in vogue. It is the author's opinion that from the very onset of the attack our efforts should be directed to controlling the toxæmia and its effects. 1, By limiting the production of the toxine in the lung and elsewhere; 2, by antidoting it after its absorption into the blood; 3, by diminishing its amount through free elimination; and, 4, by neutralizing or combating its effect on the organism. Many antiseptics, such as creosote, sodium salicylate, carbolic acid, salol, and quinine have been advocated. In special cases, given at the right time, they often exert a favorable influence. But time and again irreparable harm has been done by their injudicious administration or too long continuance. As we have no defi-

nite knowledge of the avenue by which the toxins of pneumonia are eliminated, we should use the ways that have proved most reliable, catharsis, diaphoresis, and diuresis. The bowels should act once a day, if necessary by saline cathartics; sweating should be produced by external means in severe cases, liquor ammoni acetatis, potassium citrate, drinking of hot water, but not pilocarpine; these act also upon the elimination by the kidney. Fresh air is very essential. Venesection is sometimes indicated to reduce venous stasis. The restlessness should be controlled, and if necessary by morphine, the bromides, or chloral. In certain cases, in alcoholics, the free use of alcohol is advocated. Aconite in small doses acts well upon the heart when the cardiac rate is too high; strychnine should be used as a stimulant for loss of the vasomotor control, sometimes to be assisted by atropine, cocaine, and caffeine, or by digitalis, ergot, and adrenalin.

2. **The Bier Treatment by Hyperæmia.**—Breuer gives his experience with the method advocated by Bier. The author calls special attention to this treatment in tuberculosis, as conducted in the university hospital at Bonn. In tuberculosis of the wrist fifteen patients were cured, two improved; the average time of treatment being twelve months. Tuberculosis of the elbow; eight patients were cured, three improved; average treatment, nine months. Tuberculosis of the foot; eight patients cured, three improved, one not influenced; average time of treatment, ten months. One case of tuberculosis of the shoulder was treated, with perfect result. Tuberculosis of the knee; three patients were cured and two improved. Breuer treated several patients according to Bier's method of blood stasis, modified somewhat by Dr. Klapp, Bier's chief surgeon. In these cases he had the impression that Bier's treatment had been a great help, in so far as it shortened the duration of the affection and localized it.

3. **Chronic and Periodic Vomiting.**—Roberts states the following practical observations as a help in diagnosing the causes for chronic and periodic vomiting: Vomiting of a chronic type, following a gradually developed epigastralgia one half to three hours after the ingestion of food is attributable to peptic ulcer; when it occurs ten to fifteen minutes after ingestion to stenosis of the cardia, nervous abnormality, cerebral lesion, or to protracted acute gastritis. Copious vomiting ten or more hours after ingestion indicates a muscular insufficiency. Vomiting in the night is particularly liable to occur in cholelithiasis, periodic hypersecretion, muscular insufficiency, and nervous abnormality. Vomiting attempts when the stomach is empty have a reflex cause, toxæmia, a cerebral lesion, or nervous abnormality, while morning nausea and retching are signs of pregnancy, alcoholism, pharyngitis, nephritis, or nervous abnormality. Secretory neurosis or an ulcerative lesion produce periodic vomiting of clear gastric juice, while migraine is characterized by vomiting as a sequel to headache. Attacks of vomiting of sudden onset, with tinnitus, deafness, and vertigo are attributable to disturbances in the internal or middle ear. Periodic attacks of vomiting of sudden onset with more or less severe gastric pain, nausea, constipation, and freedom from abdominal tenderness, but with retraction, are suggestive of spinal crisis, idiopathic nervous vomiting and lead poisoning. Periodic attacks of vomiting after abdominal colic and constipation with localized or general tympany, are suggestive of chronic intestinal stenosis.

4. **The Ætiology of Eczema.**—McGuire remarks that eczema arises in consequence of some unknown constitutional condition, and is brought into evidence in consequence of some external irritant acting upon a vulnerable skin. Though no child was ever born with eczema, many are brought into the world with a vulnerable skin that may later develop the disease under

certain circumstances. It is the author's opinion that eczema cannot be regarded as hereditary, either directly or indirectly. In reference to contagiousness, he says that the consensus of opinion is that it is neither contagious nor autoinoculable. The authorities on the ætiology are very confusing. McGuire consulted not less than fifty-one authors. He thinks that eczema is a more or less chronic catarrhal inflammation of the skin, accompanied by peculiar symptoms that are caused by some form of irritation, external or internal, acting upon a susceptible cuticle. There must be primarily a certain condition of the skin itself, a predisposition. But he predicts that some time in the near future the name eczema will be confined to that form of cutaneous disease that is caused by some specific parasite acting upon a vulnerable skin.

BRITISH MEDICAL JOURNAL.

February 10, 1906.

1. The Relation of Angina Pectoris and Allied Conditions to an Arterio-cardiac Reflex Having Its Origin in the Abdomen, By W. RUSSELL.
2. Food Fever in Children, By E. SMITH.
3. On Drug Idiosyncrasies in Relation to an Official Dosage, By C. O. HAWTHORNE.
4. Industrial Lead Poisoning. An Account of an Outbreak Amongst Yarn Workers, By J. S. CLAYTON.
5. Hereditary Syphilis and Enteric Fever. A Case with Commentary, By J. D. ROLLESTON.
6. Some Clinical Features of Mediterranean Fever. With Particular Reference to Cardiac Complications, By P. W. BASSETT-SMITH.
7. Hæmoglobinuric Fever in Syria, and Some Notes on the Occurrence of the Disease in Palestine, By E. W. G. MASTERMAN.
8. A Case of Measles in the Puerperium, By M. CAMPBELL.
9. A Case of Adhesive Mediastinopericarditis, By J. M. BENNION.
10. Some Unusual Variations of the Erythematous Syphilide, By A. COOPER.

1. **Angina Pectoris.**—Russell explains the clinical pathology of angina pectoris as follows: In the first place there may or may not be a morbid anatomy. Whatever the degree of intensity the heart pang may reach, it is always the result of a sudden embarrassment of the myocardium, and usually and chiefly that of the left ventricle. The *angor animi* is common to all sudden heart embarrassments. This embarrassment is an impairment of the function of contractility, which is due either, in the first place, to the sudden strain put upon a feeble myocardium by general arterial contraction, or by a call for increased work; or, in the second place, to a myocardium feeble, not from anatomical changes in it, but temporarily so, from deficient blood supply, the result of the participation of the coronary arteries in a general arterial spasm. The cause of the sudden heart embarrassment in the vast majority of cases is the arterial hypertonic contraction or spasm contraction, the latter term indicating the more sudden and severe degrees of contraction. Even toxic conditions only give rise to angina when the factors indicated are present. Remarkable relations exist between the digestive system, or the materials introduced into it, and the general arterial system. Conditions having their origin in the abdomen can induce a hypersensitiveness of a normal vasomotor reflex, which becomes apparent as arterial spasm, whenever the exciting conditions are sufficiently pronounced. When these conditions are altered the arterial spasm disappears. The hypersensitiveness of the vasomotor centre will explain the long recognized phenomenon, that paroxysms of angina have as their main determining cause, physical effort, mental emotion, or digestive disturbances.

2. **Food Fever.**—Smith describes, under the name of food fever, a disorder of children, consisting of an attack of fever which comes on suddenly, is accompanied by signs, more or less pronounced, of digestive

disturbance, lasts in its acute form for several days, and may linger on in a modified degree for some weeks. If the attacks occur frequently, once a month or so, their effect upon the nutrition of the patient is highly injurious. The subjects of the complaint are usually neurotic children of either sex between the ages of three or four and ten or twelve years. The attack begins with headache, sometimes with vomiting, sometimes with diarrhoea. The temperature rises to from 101° F. to 105° F., it is usually reduced by a dose of calomel, but rises again. The cases are probably primarily attacks of acute gastric catarrh. The persistence of the fever is due to reabsorption from the bowel of injurious products of decomposition. To prevent and cut short the attacks a careful diet is of the utmost importance. Excess of carbohydrates and articles of food capable of undergoing unwholesome fermentation in the bowel, should be forbidden. Milk, except in limited quantity, is harmful. The proper diet for these children consists of mutton, poultry, white fish, well boiled green vegetables, and eggs, plenty of butter and stale bread, and the salted foods—such as bacon.

4. **Industrial Lead Poisoning.**—Clayton reports an outbreak of nine cases of lead poisoning occurring among yarn workers. As in all other outbreaks among the same class of workers, the trouble came from the heavy orange yarns, which give 0.29 per cent. of dust on washing, or one pound per 345 pounds of yarn, containing 2.85 per cent. of lead. No cases of lead poisoning were traced to the dyeing process or to the handling of the yarn while wet. It was entirely in the later stages of making ready for packing that the trouble arose. The nine cases of lead poisoning presented no points of particular individual interest, except that two were of the encephalopathic type, with acute epileptiform attacks added to the chronic symptoms. To do away with the danger of lead poisoning, all nodding in these particular works is now done over hoppers through which pass down drawn currents of air. The employees are also furnished with respirators, but it is with difficulty that the wearing of the same is enforced.

6. **Mediterranean Fever.**—Bassett-Smith has studied the important effects produced upon the heart by the specific organism of Mediterranean fever. These may be divided into two kinds: (1) Toxic; (2) microbic. Not only is the heart subject to be influenced most detrimentally by the toxic product of the micrococcus *melitensis*, but the organism itself is able to set up endocardial changes which are most dangerous. The organism is constantly present in the blood during the course of the illness, it is very virulent, and the protective leucocytes in the blood are greatly diminished both in number and in protective (phagocytic) power. In very prolonged cases with much cachexia, the agglutination reaction may fall so low as not to be demonstrable.

8. **Measles in the Puerperium.**—Campbell reports a case of measles occurring in a young primipara. She was exposed to infection on January 28th, had a normal labor on February 1st, and a normal puerperium until February 9th, when the temperature rose to 101° F., a typical measles rash appearing the following day. The lochial discharge was not increased nor offensive. On February 17th the infant had a typical measles rash.

LANCET.

February 10, 1906.

1. Aphasia (Lecture II), By B. BRAMWELL.
2. The Ethics of the Medical Profession in Relation to Syphilis and Gonorrhoea, By C. WILLIAMS.
3. Some Observations Upon the Ætiology of Oblique Inguinal Hernia, By R. W. MURRAY.
4. False Rupture of a Pyosalpinx During Labor, By J. W. ROB.

5. *Hæmatological and Chemical Observations in a Case of Splenomedullary Leucæmia Under X Ray Treatment, with an Account of the Histology of the Hæmopoietic Organs After Death.* By J. C. G. LEDINGHAM.
6. *A Case of Bilharzia Infection of the Vermiform Appendix; with a Pathological Report.* By J. BURFIELD and E. H. SHAW.
7. *A Case of Torsion of the Testicle: with Notes on the Pathological Conditions in Three Specimens.* By R. M. GOING and A. KEITH.

1. **Aphasia.**—Bramwell, in the second of his lectures on aphasia, considers the construction and function of the auditory speech mechanism. In man the auditory centre seems undoubtedly to be located in the upper part of the temporosphenoidal lobe. Clinico-pathological observations seem to suggest that in the cortical centre for hearing (the auditory centre as a whole) there are separate nervous mechanisms for the registration of: (a) Ordinary sounds; (b) musical sounds; and (c) speech sounds. In most normal individuals the auditory speech centre, or the higher auditory centre, is chiefly active on the left side of the brain. Because of the larger number of sound combinations it has to register, it must be a much larger and more elaborate mechanism than the lower auditory centre. An analysis of the clinical phenomena presented by cases of disease seems to show that the nervous impulses concerned in the hearing, both of ordinary sounds and of speech sounds (spoken words) are carried by each auditory nerve to both auditory centres. The auditory speech centre seems to be: 1. A centre in which auditory speech symbols (after they have passed through the lower auditory centre, where they are perceived merely as sounds) are received, registered, and brought into relationship by connecting fibres with the associated ideational centres, the other centres of the cerebral cortex in which the meaning of words (object percepts and other percepts) is received, registered, and stored. 2. A centre through which (*i. e.*, from which) the nervous impulses concerned in the production of repeated (echoed) speech pass in order to reach the vocal speech centre. 3. A centre in which thoughts and ideas are first put into concrete speech form in order that they may be transmitted to the vocal speech centre. The nervous impulses concerned in the production of spontaneous vocal speech seem to pass directly from the auditory speech centre to the vocal speech centre. 4. A centre to which, in most normal individuals and in ordinary circumstances at least, visual or written speech symbols pass in order that they may be brought into association with the associated centres. 5. A centre in which thoughts and ideas are first put into concrete speech form in order that they may be transmitted to (a) the visual speech centre and (b) the graphic speech centre. It seems probable that in most normal individuals the nervous impulses concerned in the production of spontaneous written speech pass indirectly from the ideational centre to the visual and graphic speech centres—*i. e.*, through the auditory speech centre to the visual speech centre from which they pass to the graphic speech centre. Sudden and complete destruction of the auditory speech centre should produce: 1. Abolition of the power of understanding spoken words. 2. Defects in the production of vocal speech. 3. Defects in the power of understanding symbols in reading, and reading aloud. 4. Defects in the production of spontaneous writing and writing to dictation. 5. Inability to name objects presented to the other senses (objects seen, touched, smelt, tasted).

3. **Oblique Inguinal Hernia.**—Murray suggests that, granted the existence of a potential hernial sac, the occurrence or not of a hernia largely depends upon two factors—the size of the opening at the internal abdominal ring and the strength of the muscles guarding it. If in the case of potency of the processus vaginalis the

opening at the internal abdominal ring be small and the muscles guarding it (which might be called the inguinal sphincter) powerful, there the probabilities of a hernia occurring are slight. This would explain the great frequency of inguinal hernia in infants. The frequency with which hernia first appears about the age of puberty is explained by the increased amount of exercise usually indulged in at this period, which overtaxes the muscles of the inguinal sphincter, allowing the bowel to escape. Though the processus vaginalis has been to some extent patent since birth, no hernia has appeared, for the internal opening was never large and the sphincter was well able to guard it, but with declining years and weakened muscles, the sphincter at some critical moment fails and the bowel or omentum passes through. Hernia not infrequently makes its first appearance during convalescence from long illness. The chief objects in operating, therefore, should be completely to do away with any semblance of an internal opening or depression, and at the same time to preserve the inguinal sphincter intact.

5. **X Rays in Leucæmia.**—Ledingham reports a case of splenomyelogenous leucæmia in which great improvement, both general and in the blood, followed the use of the x rays. The patient died from an intercurrent attack of influenza, so that careful post mortem and histological examination of the hæmatopoietic organs was made possible. Malpighian follicles were absent in the spleen, and lymphoid elements were very scarce, but the most remarkable change was the substitution of proliferating undifferentiated basophile myelocytes for the fully formed neutrophile elements usually found in the spleen in this disease. The writer thinks that in the interests of the patient it would be advisable to exercise the greatest caution in continuing x ray treatment once the total leucocytes have attained normal limits.

6. **Appendicitis Due to Bilharzia.**—Burfield and Shaw report the case of a man, aged thirty-six years, who had lived in South Africa; he had suffered from abscesses and fistulas in the gluteal and appendiceal regions, and finally was operated on for appendicitis. On cutting sections of the removed appendix ova of bilharzia hæmatobia were seen. There was nothing to suggest bilharzia infection of the genitourinary tract or of the rectum. The myracidium or embryo trematode of bilharzia may enter the body by three different routes, by the mouth, by the skin, and by the urethra, or rectum.

LYON MEDICAL.

January 28, 1906.

Stenosis of the Isthmus of the Aorta in an Infant,

By J. AUDRY.

Stenosis of the Isthmus of the Aorta in an Infant.—Audry reports the case of an infant that lived twenty-three hours suffering from intense and paroxysmal dyspnoea, accompanied at intervals by a sort of slow wheezing. Pulmonary auscultation was negative. There was a dulness in the left subclavicular region and in the upper part of the axilla, which was continuous with the cardiac dulness. Radiography showed a corresponding dark zone. There was precordial bulging. The heart sounds were dull and distant, with no murmur. Respiration a little obscured, particularly on the left side, no râles. Cyanosis marked, but not comparable with that present in true morbus ceruleus. At the autopsy the heart was found to be double its normal size, with the greater degree of hypertrophy in the right ventricle. The subclavicular dulness was shown to be due to the hypertrophy of the heart and atelectasis of the compromised left lung. There was stenosis of the isthmus of the aorta between the left subclavian and the arterial canal and very marked again at the level of the primitive carotid and the brachiocephalic trunk. Above the stenosis the aorta was diminished in

size, but not in a proportionate degree. The pulmonary artery was dilated from its origin. It was slightly contracted at the level of the persistent arterial canal. There were persistent interauricular and interventricular communications.

February 6, 1906.

A Case of Double Empyema Following Double Pneumonia. Treatment by Repeated Aspiration; Recovery, By NORDMANN and MOUTTOT.

Double Empyema After Double Pneumonia.—Nordmann and Mouttot give the clinical history of a case of the nature indicated by the title of the paper. It is of interest chiefly because it is said that only fifty-seven cases of double empyema have hitherto been recorded.

PRESSE MEDICALE.

January 27, 1906.

1. Opening the Pleura Without the Production of Pneumothorax. By TH. TUFFIER.
2. Is There a Stomatitis Provoked by Rubber Plates Carrying False Teeth? By C. MAHE.

1. **Opening the Pleura Without the Production of Pneumothorax.**—Tuffier describes at considerable length a method for the maintenance of respiration and for the performance of the operation in a pneumatic chamber, so that the lungs of the patient will continue to fill the thoracic cavity after its wall has been opened.

2. **Stomatitis Caused by Rubber Plates.**—Mahe describes a stomatitis met with in people who wear artificial teeth attached to rubber plates, and is inclined to ascribe it to the presence of soluble salts of mercury employed in the preparation of the plates.

January 31, 1906.

1. Senility, By LETIENNE.
2. Gastric Radioscopy. The Form, Lower Limit, and Method of Filling the Stomach, By G. LEVEN and G. BARRET.
3. Phlebotomy in Epilepsy, By G. B. HOUZEL.
4. Surgical Anæsthesia by Magnesium Sulphate, By R. ROMME.

1. **Senility.**—Letienne considers senility to be an extremely complex condition brought about by the concomitant action of various chronic, abortive diseases which are scarcely appreciable or definable by the patient or the physician.

2. **Gastric Radioscopy.**—Leven and Barret describe, with the aid of illustrations, the form of the stomach as determined by radioscopy, the lower limit of that organ with relation to the umbilicus, and the changes which take place in its shape when it is distended with fluid.

3. **Phlebotomy in Epilepsy.**—Houzel employed bleeding in two cases of epilepsy with good results. The first case seemed to be at the point of death when it came under treatment, in the other the paroxysms, which had been succeeding each other without intermission, ceased. In both the amelioration has lasted for a considerable time and the author speaks of it as a cure.

4. **Surgical Anæsthesia by Magnesium Sulphate.**—Romme reviews the paper on this subject read last year at the Academy of Medicine by Dr. Meltzer, of New York, and reviewed in our *Journal*.

SEMAINE MEDICALE.

January 31, 1906.

1. Chronic Mucopurulent Parotitis, By E. REMOUCHAMPS.
2. Rectal Prolapse in Children.

1. **Chronic Mucopurulent Parotitis.**—Remouchamps reports the case of a woman, eighty-six years of age, whose parotids had been swollen ever since she was six years old. When she was eleven years old the glands began to secrete a whitish saliva. At the age of thirteen she began to work in a store and was rarely absent from her work even when shooting pains in her

parotids rendered her less disposed than usual to work. She married at twenty-one and bore six children. She has been accustomed to smoke morning and evening and has chewed tobacco constantly, but this has appeared to have no influence on her parotids which were of great size and poured forth an abundant secretion. At the time the patient came under observation the parotids formed tumors which measured 9.5 centimetres vertically by 7 centimetres horizontally. The superjacent skin was normal in appearance and not adherent. On palpation the tumors felt close grained and mobile. Pressure caused no pain, but did cause the mouth to fill with saliva. The saliva was examined chemically and microscopically, and the conclusion reached through these examinations was that the affection was a benign, chronic, mucopurulent inflammation of the parotid glands.

BERLINER KLINISCHE WOCHENSCHRIFT.

January 15, 1906.

1. Bilateral Empyema, By S. LAACHE.
2. Forensic Differentiation of Blood Through Hæmolytic Action, By M. NEISSER and H. SACHS.
3. Inhibition of Phagocytosis of Bacillus Subtilis by Subtilis Aggressin, By E. WEILL and H. NAKAYAMA.
4. Inhibitory and Anæsthetic Action of the Magnesium Salts, By S. J. MELTZER.
5. Conduction of Sensation in the Spinal Cord, By M. RATHMANN.
6. Treatment of Neuralgia by Injections of Alcohol, By SCHLOESSER.
7. Bacteria in the Blood and Their Significance, By H. BEITZKE.

1. **Bilateral Empyema.**—Laache reports two cases, one, a fatal case in a man, in which the suppuration was due to actinomycosis. In the other case, which recovered, the aspiration produced an hæmoptysis and a large hæmatoma at the site of puncture.

3. **Subtilis Aggressin.**—Weil and Nakayama find that the aggressin of the bacillus subtilis is capable of delaying phagocytosis produced by the bacillus, upon the leucocytes of guinea pigs in the test tube. This is not the case, however, in extracts of the bacillus or in serum of the animal in which the bacillus has been cultivated. The phenomenon probably is due to the fact that the aggressin in combination with the bacilli, injures the leucocytes. The phenomenon is specific.

4. **Anæsthetic Action of Magnesium Salts.**—(Meltzer's paper has already been thoroughly reviewed in this *Journal*.)

6. **Bacteria in the Blood.**—Beitzke declares that the simple microscopical examination of the blood for bacteria is not sufficient. Cultural methods must be followed, involving the implantation of the blood obtained in a sterile manner upon agar and bouillon. The author describes the technics of obtaining the blood. In the cadaver, he recommends aspiration of the heart blood since the germs are apt to be more abundant there. In practice, the agglutination test is also very useful. For the differential diagnosis, in doubtful cases, between typhoid fever, acute miliary tuberculosis and ulcerative endocarditis, blood examinations are very important. The presence of bacteria in the blood is not necessarily indicative of a bad prognosis, although it becomes worse if each successive culture shows a greater number of bacteria. Cases of erysipelas, furunculosis, and carbuncles which give positive blood findings, are almost always fatal.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT.

January 23, 1906.

1. Appendicostomy, By LANZ.
2. Treatment of Acute Appendicitis, By GRASER.
3. Early Operation for Epityphlitis, By GUNKEL.
4. Mechanical Treatment of Ileus, By WILMS.
5. Nonstaining Cells in the Human Blood, By H. SCHRIDDE.

6. Microorganisms in Malignant Tumors,
By O. SCHMIDT.
7. Valvulus of the Sigmoid Flexure, By DELKESKAMP.
8. Subcutaneous Rupture of the Intestine with Cure by
Operation, By HÖPFL.
9. Pathogenesis of Acute Articular Rheumatism,
By A. SEHLBACH.

1. **Appendicostomy.**—Lanz speaks of the indications for a timely performance of appendicostomy. He performs the operation on the first or second day of the attack, when possible. During the attack, he operates only for vital indications and prefers to incise the abscess and drain it. Exudations which are not absorbed or go on to suppuration, he prefers to incise, since this makes the subsequent appendectomy easier if performed. In cases which he has observed from the onset, he always operates in the interval, removing the appendix inside of one month when the exudate is rapidly absorbed, inside of three months when it is slowly absorbed.

2. **Appendicitis.**—Graser is not satisfied with the present high average mortality in this disease. It is impossible to establish an absolutely correct diagnosis of the condition of the appendix and the peritonæum by clinical means, and he therefore advises operation on the first or second days in all severe cases. At this time the process may still be confined to the appendix, and the operation is not dangerous with good technics. Nonoperative cases run a better course if all nourishment by mouth is stopped and laxatives are to be entirely avoided. Opium must not be given until one is certain of the exact condition. One of the most significant symptoms of an unfavorable character is the diffuse sensitiveness of the abdomen with tension of the abdominal muscles.

5. **Nonstaining Blood Cells.**—Schridde states that in postembryonal life, lymphocytes and leucocytes represent two different cell races. Their cell descendants also differ; from lymphoblasts only lymphocytes can develop, from myeloblasts only leucocytes or their fore-runners can be derived. The leucocytes are normally derived from the bone marrow, while the lymphocytes are normally produced only in the lymph follicles. Both reach the circulation by active motion.

ZENTRALBLATT FUER CHIRURGIE.

January 27, 1906.

1. Closed Wounds or Drainage in the Early Operation for Acute Appendicitis? By J. BORELIUS.

1. **Operation for Appendicitis.**—Borelius says that the earlier the operation for acute appendicitis is performed, the more frequently can the wound be closed without drainage. The character of the case has, of course, an important bearing on the question. If the appendix is not perforated and can be removed without opening it, the wound can generally be closed even if the appendix is gangrenous, and there is some exudation upon the surrounding peritonæum. In all cases, no matter how difficult or tedious, Borelius advises the removal of the appendix.

ZENTRALBLATT FUER GYNAEKOLOGIE.

February 3, 1906.

1. Sex of the Newborn, with Special Reference to Macerated Children, By M. LE MAIRE.
2. A New Instrument for Ventrofixation of the Uterus, By F. FOERSTER.
3. Treatement of Ureteral Fistulæ in Women, By N. PHAENOMENOFF.
4. Treatment of Osteomalacia, By A. THEILHABER.

1. **Sex of Macerated Children.**—Le Maire, of Copenhagen, summarizes the statistics of the clinic there. The average relation of sexes in all labors is 1,078 boys to 1,000 girls. Of these 94.3 per cent. are born alive. Of those born dead, 5.7 per cent., there are 1,250 boys to 1,000 girls. Of the still born infants, 38.7 per cent. are macerated, and of these there are 1,214 boys to 1,000

girls. Male infants are born macerated in greater proportion than females up to the sixth month of pregnancy.

ZENTRALBLATT FUER INNERE MEDIZIN

February 10, 1906.

1. Hitherto Undescribed Source of Alimentary Pentosuria, By R. VON JAKSCH.

1. **Alimentary Pentosuria.**—Von Jaksch mentions a case of chronic pentosuria which had been treated for years as one of diabetes. He finds that alcohol free fruit juices are rich in pentose. If a healthy person, or one whose urine is absolutely free from carbon-hydrates, drinks from one to one and one half litres of such fruit juices, such as apple juice, the urine will react to Trommer's and Mylander's tests for sugar, but will not ferment on the addition of yeast. Tollen's pentose test is decidedly positive. The pentosuria lasts at least twenty-four hours. Von Jaksch advises asking the patient in every case in which sugar is supposed to be present, if he has partaken of fruit juices; and he further advises making the fermentation and Tollen's pentose tests.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

January 28, 1906.

1. Albuminuria Studies by the Method of Fractional Precipitation, By A. BARLOCCO.
2. On the Origin of Rhythmical Movements of the Head in Basedow's Disease, By BOCCIARDO.
3. Chondrofibroma of the Upper Maxilla, By LOSIO.
4. A Rare Case of Traumatic Paralysis of the Radial Nerve, By L. BOBBIO.
5. The Action of Suprarenal Extracts of Man in Some Diseases, By A. CONTI and O. CURTI.
6. Contribution to the Value of Yeast in Phlegmonous Tonsillitis, By U. MELZI.

2. **Head Jerking in Basedow's Disease.**—A number of authors have recently published observations on a symptom in Basedow's disease, consisting in rhythmical jerks of the head, sometimes anteroposterially and at other times laterally. The explanation for this symptom, as given by Bocciardo, is as follows: The vertebral arteries describe two curves before entering the cranium through the occipital foramen. These curves, under the influence of the wave of blood that passes through the arteries at each systole, tend to straighten out and transmit an impulse from below upward to the occiput, very close to the fulcrum represented by the vertebral column. During each systole, therefore, the head is moved from behind forward. As regards the movement from left to right, the probable cause of this is a diminished pressure in the right carotid, owing to the greater development of the right thyreoid to be observed in the cases in which lateral jerks occur. This asymmetrical development of one lobe is frequently noted in exophthalmic goitre. When the two factors exist together there is an oscillation of the head from right to left and from before backwards. The symptom in question is undoubtedly useful in the diagnosis of Basedow's disease.

RIFORMA MEDICA.

January 27, 1906.

1. The Ammoniacal Reaction of Ehrlich, By EMILIO FITTIPALDI.
2. A Fundamental Question in the Doctrine of Fever, By L. GIUFFRÉ.
3. The Dosage of Röntgen Rays, By CARLO COLOMBO.
4. Methyl-Atropine Bromide, By BRUNO DOMENICO.

1. **Ehrlich's Ammoniacal Reaction in the Urine.**—Fittipaldi studied the efficiency of Ehrlich's dimethyl amidobenzol reaction in the urine, which is known for the sake of simplicity as Ehrlich's aldehyde reaction. This reaction was announced four years ago, and consists in a change of color in the urine in the presence of dimethyl amidobenzoldehyde in a solution in hydrochloric acid. Ehrlich and his pupils maintained that

the reaction was due to the presence of an unknown substance, possibly a monoethyl or a diethyl glucosamin. Others who have written more recently attribute the reaction to indol, and the most recent work on the subject by Bauer attribute the reaction to the presence of urobilinogen.

3. The Dosage of Roentgen Rays.—Colombo emphasizes the necessity of accurate doses for Röntgen rays in the scientific application of this therapeutical agent. Unfortunately but little attention has been paid to this subject, and most authors describe the technics, the manner of manipulating the tube, etc., but do not speak of exactly measuring the amount of the active rays to be employed. When the therapeutical affect of radium is described, care is taken always to mention the precise duration of the exposure, the distance of the radium tubes from the object acted upon, and the radioactive strength of the elements, expressed in conventional units. If this has been found indispensable for radium it is certainly more so for the x rays, the effects of which are much more intense. The dosage of Röntgen rays can be determined in a variety of ways, but the most practical method are those involving the use of chromoradiometers, such as that of Holzknecht. This instrument measures the amount of radiations absorbed by the substance exposed, and a unit of measure known as the "Holzknecht unit," which corresponds to No. 1 on the scale of the apparatus mentioned, may be employed for conveniently designating the comparative absorption of radiant energy by an organ or body exposed to the x rays. A number of factors determine the Holzknecht unit, in addition to the amount of rays produced by the tubes; for example, the distance of the irradiated surface from the focus of origin of the rays and the direction with which these rays strike the exposed surface. The high doses from 10 to 15 units at each sitting may be used in operable tumors in which the need of treatment is urgent. In all other cases the exposure should be limited to five units by the Holzknecht apparatus, and in this way we can avoid the serious complications which result from overexposure to the x rays.

4. Methyl-Atropine Bromide.—Domenico, in a study of the new atropine compound, methyl-atropine bromide, which he compared to other mydriatics, concludes that this new preparation presents certain distinct advantages, and is probably the most efficient substitute for atropine in special cases, as, for example, in the aged, in children, and particularly when atropine is not well borne. It appears that in this compound the atropine is mitigated in its action by the bromine, so that no untoward effects result from its use. Methyl-atropine bromide can be given internally or subcutaneously in the treatment of pain, cardialgia, pleuritic pain, in intestinal and hepatic colic, and in the pain of appendicitis, convulsions, night sweats of consumptives, etc.

ROUSSKY VRATCH.

December 31, 1905

1. The Influence of Repeated Injections of Serum and of Active Immunizants Upon the Presence of Antibodies in the Blood, By Z. P. SAKHAROFF.
2. The Action of Alypin on the Eye, By THEO. I. ZHULEBINE.
3. The Use of Protective Inoculations Against Typhoid in Warfare, By L. A. JACOBSON.

1. Repeated Injection of Immunizing Substances.—In a previous article, Sakharoff showed that the repeated injection of antitoxic serum may be followed by a decrease in the curative properties of these serums. One injection to a certain extent counteracts and limits the action of the next succeeding dose. The practical interest of this problem lies in the question as to the doses of antitoxine in general. In this new series

of experiments now reported by Sakharoff immunizing bodies were injected at intervals, and the effect of the second dose upon the immunization was observed. We know that the introduction of serums and of various bacterial products give rise to the formation of antibodies, and an animal which has received one dose of an active immunizant can elaborate agglutinines more rapidly and more energetically than a control animal. This was proved by Sakharoff's experiments. Further experiments are necessary, however, to confirm this, as it is possible that the variations in the rapidity of forming agglutinines depend upon differences of specific sensibility in individual animals.

2. Action of Alypin on the Eye.—Alypin is a local anæsthetic introduced in 1905, which is employed in solution of from one to three per cent. Zhulebine investigated its effects in operative work on the eye. Solutions of the strength mentioned do not affect the pupil nor the accommodation, but a five per cent. solution in quantities of more than six drops produces a distinct dilatation of the pupil, lasting about thirty minutes. Alypin does not produce any injurious affects upon the cornea. Zhulebine employed it in a number of operations on the eye, in some instances combining it with a few drops of 1:6,000 adrenalin solution. Alypin is much less toxic than cocaine; is less expensive than the latter; its solutions are easily sterilized without decomposing, and the anæsthesia produced with it lasts a considerable time, so that the new remedy presents many advantages over cocaine.

3. Preventive Inoculations Against Typhoid in the Army in the Field.—Jacobson studied an epidemic of typhoid among a garrison of 4,000 men in a town in Manchuria during the recent Russo-Japanese war. The epidemic assumed a considerable proportion, and the mortality in the hospital, which contained 200 beds, was between eight to nine per cent. The author recommends as the most rational method of preventing typhoid fever the inoculation of preventive substances in all soldiers who are destined for active service. These inoculations were made on a large scale in the British army during the Anglo-Boer war, and also in the German military expedition in South Africa. It appears that a special order of the medical inspector of the Russian army distinctly prohibited the employment of inoculations against typhoid and against dysentery. For this reason the author was able to employ inoculations only in a few persons who expressed their desires to receive them. From this limited number of cases no conclusions can be drawn, but on the basis of experience during the Anglo-Boer war and of the German expedition in Africa, the author strongly recommends the employment of these preventive inoculations as a routine method in armies preparing for active warfare.

AMERICAN JOURNAL OF OBSTETRICS

February, 1906.

1. The Toxæmia of Pregnancy, By I. STRAUSS.
2. The Surgical Treatment of Retrodisplacements of the Uterus, By J. W. BOVEE.
3. One Hundred Consecutive Abdominal Sections Performed at the Lewisham Hospital Without a Death, By W. J. S. MCKAY.
4. Fibroma Molluscum Gravidarum. A New Clinical Entity, By S. M. BRICKNER.
5. Remarks on the Dermatoses of Pregnancy, By S. POLLITZER.
6. Abdominal Pregnancy Persisting Beyond the Normal Period of Gestation, with Report of Cases, By C. A. L. REED.
7. A Further Consideration of Mesenteric Cysts, By O. S. PFAFF.
8. Some Observations Respecting the Treatment of Face Presentations, By A. P. CLARKE.
9. The Treatment of Puerperal Eclampsia, By E. G. ZINKE.

10. Intermittent Hydrosalpinx, By P. FINDLAY.
 11. Pus Collections in the Female Pelvis, By H. GRAD.
 12. A Case of Melena Neonatorum,
 By A. E. BLOUNT and S. M. GARDNER.

2. The Surgical Treatment of Retrodisplacements of the Uterus.—Bovee states that in addition to the ligamentous supports of the uterus the following conditions are of importance: 1. The angle at which the uterus lies with reference to the vagina. 2. The potentiality of the vaginal canal as opposed to the idea of an actual space beneath the uterus. 3. The action of the strong perineal muscles and fascia in maintaining the supporting strength of the vagina, and converting an actual canal into a valvular slit in the structures. 4. A postulate balance between intraabdominal pressure, and that of the external atmosphere. His conclusions are: 1. That the complications rather than the uterine displacement furnish the cause for surgical interference. 2. All operations for the correction of uterine retrodisplacements should be based upon the pathological and anatomical abnormalities of the uterus and adjacent structures. 3. Any operation that changes one dislocation of the uterus into another is illogical and hence unsurgical. 4. Most of the cases of retroversion which require special operations are best treated by appropriate operations upon the round and uterosacral ligaments.

3. One Hundred Consecutive Abdominal Sections.—McKay believes that the excellent results obtained in abdominal surgery are due to the prophylactic measures which are so generally adopted. The after treatment in many cases is simple enough, but the treatment of grave postoperative complications is still unsatisfactory. We must seek the aid of the laboratory and its assistance will add much to our clinical experience. We must look in this direction for a drug which will produce sleep and relieve pain without causing constipation and tympanites, for a drug which will purge after hypodermic injection. We must also look for a proper explanation of tympanites, and we must obtain various serums for administration in peritonitis.

4. Fibroma Molluscum Gravidarum.—Brickner states that this is a lesion of the skin appearing in the latter half of pregnancy, bearing the histological characters of fibroma molluscum, but differing from it clinically in its total disappearance post partum at a time when the other regenerative processes are being completed. Its distribution is limited to the neck, the breasts, and the submammary area, but this is not always the case and is not an essential element of the condition. The pigment runs from a light yellowish brown to a dark brown. The disease forms a clinical entity, hitherto undescribed, the essential elements of which are the appearance of fibrous mollusca during pregnancy and their vanishing post partum. Pathologically the growths belong to the group of fibroma molluscum.

6. Abdominal Pregnancy Persisting Beyond the Normal Period of Gestation.—Reed reports three cases of this character from his own experience and seven which he has collected from recent literature. He refers to the contention of Tait which was sustained by the frozen sections of Berry Hart and by other reliable evidence that abdominal pregnancy was a possibility. He found that degenerative changes in the fœtus began soon after fœtal death, and concluded that until such changes were sufficiently under way to impair the vascular connection of the placenta with the tissues to which it was adherent operative procedures must necessarily be accompanied with great risk, both from hæmorrhage and infection. A longer delay than two or three months was not deemed desirable on account of the sepsis and pain which may be produced. Lithopedial conversion of the fœtus is possible, but is not necessarily a consequence. The principles which should guide the operator are (1) he should not provoke un-

controllable hæmorrhage, (2) he should avoid denuding a surface which may become an avenue of infection, when that is possible, (3) he should avoid violent efforts at enucleation which will damage organs with which the fœtal sac was in contact.

8. Some Observations Respecting the Treatment of Face Presentations.—Clarke affirms that in any case in which the diagnosis of face presentation is clearly determined, chiefly by external examination, speedy resort to podalic version will prove highly satisfactory, in most cases, if the membranes have not ruptured, or if they have ruptured and there is a tendency to prolapse of the funis. Also in cases in which the child is still living and the os or cervix uteri has undergone dilatation to a considerable degree, or is dilatable.

9. The Treatment of Puerperal Eclampsia.—Zinke divides treatment into prophylactic and curative. In the former, before the appearance of symptoms, it includes an intelligent management of the pregnant state. After the appearance of the well known symptoms he advises milk diet, free catharsis, frequent hot baths, abundance of fresh air, water, and exercise, abundant rest in bed, suitable woollen clothing, and glonoin as a diuretic and heart stimulant. In the curative treatment we must consider the malignant, the benign, and the intermediate varieties of convulsions. The object of treatment is (1) to control and abbreviate the duration of the seizure, (2) to protect the patient from injury during the attack, (3) to remove the cause. For the first the choice is between inhalations of chloroform, injections of veratrum viride and morphine, chloral per rectum, and venesection. Of these the morphine should be rejected as irrational. Other measures are rectal enemata of salt solution, extract of thyreoid and parathyreoid gland, and the withdrawal of cerebrospinal fluid, the last being a hazardous and doubtful procedure. For the second suitable precautions should always suggest themselves. For the third catharsis, draphoresis, and cardiac stimulation are indicated. The uterus must be emptied as promptly as possible, deep cervical incisions or vaginal hysterotomy, followed by extraction by forceps or version being the usual operative measures. Cæsarean section will sometimes be found advantageous when the indications demand it, if there is an aseptic condition and a skilled operator. Shock, excessive hæmorrhage, and prolonged operative interference must be avoided.

11. Pus Collections in the Female Pelvis.—Grad divides such collections into the intraperitoneal and the extraperitoneal. The former is the more frequent and may result from infection proceeding by way of vulva, vagina, endometrium, and Fallopian tube, or by infection which starts from within the pelvis, as in suppurating tumors, bowel perforations, and pelvic hæmatomata. The pus is caused by microbic invasion, the germs reaching the parts attacked by continuity of tissue or by way of the lymphatic stream. The agents of infection are the pyogenic germs and gonococci. The former may spread by way of the vagina and uterus, and also by the lymphatics, the latter by the mucous membrane. The two forms of infection may be combined. There may also be direct infection from traumatism as in the case of perforation of the uterus. In the extraperitoneal variety of infection there is true pelvic cellulitis, rare in the intraperitoneal variety.

THE JOURNAL OF NERVOUS AND MENTAL DISEASES

February, 1906.

1. Progressive Muscular Atrophy; A Study of the Causes and Classification, with the Report of an Autopsy,
By CHARLES L. DANA.
2. Hysterical Stigmata Caused by Organic Brain Lesions,
By HERMAN H. HOPPE.
3. A Case of Cranial Menoplegia, Probably Representing the Early Stage of an Unilateral Ascending Paralysis Due to Degeneration of the Pyramidal Tracts,
By CHARLES K. MILLS.

4. Separate Sensory Centres in the Partial Lobe for the Limbs.

By WILLIAM G. SPILLER

1. Progressive Muscular Atrophy; a Study of the Causes and Classifications, with the Report of an Autopsy.—Dana has made a clinical study of the records of seventy-two cases of progressive muscular atrophy not due to tumor, of bulbar or spinal origin. Of these patients were fifty-nine males and thirteen females, two having tabes, nineteen being syphilitic. The cervicobulbar (Duchenne-Aran) type far exceeded in frequency any other form. There were forty-six such cases, of which thirteen were with bulbar involvement. As regards race, the author is of the opinion it has seemed peculiar that there should be so few instances of the spinar form of atrophy in the Hebrew race, in which race there are so many cases of the dystrophies; he found no records of this malady in the Montefiore Home during the last fifteen years. The period during which the greatest number of cases were seen was that between the thirtieth and fortieth years, and next between that of forty and fifty. Two cases came under observation, the patients being twelve years of age. Amongst the existing causes by far the most frequent is that of some form of strenuous occupation. The importance of lead seems to be overestimated. One patient had a distinct history of an acute infection by dengue. Progressive muscular atrophy is most often excited by prolonged muscular overexertion.

2. Hysterical Stigmata Caused by Organic Brain Lesions.—Hoppe thinks from his observations that hysterical signs and symptoms which we see accompanying organic diseases of the brain are the result of organic changes in the ganglionic cells, and that these organic cell changes result in a disturbance of their functions which lead clinically to that condition which we know as hysteria. Hysteria should, therefore, be treated not as pariah of diseases, but should have careful attention, just as neurasthenia has.

Letters to the Editors.

THE EGG IDIOSYNCRASY.

HYATTSVILLE, MD., February 19, 1906.

To the Editors: Don't you think the serious element in this "egg idiosyncrasy" correspondence that is burning up space in your valued *Journal* is tainted with imagination? Why has the medical profession, so distinguished for its intellectual activity and accuracy of observation, never discovered this "eggs-traordinary" thing before?

During a medical journey of eighteen years, in hospitals and out, I have never encountered a disabled female who would not take eggs and milk, if properly approached. O yes, she will often say, "Oh, doctor, I can't eat eggs," or "I can't drink milk, it makes me so sick." But the agitated denial always has a ring in it quaintly suggestive of the note in the voice of the country lass when she sets her handsome young lover half crazy with the exclamation, "Don't you dare to kiss me!" I once had a hospital patient who declared it was impossible for her to eat eggs and milk. "I just simply can't swallow them." I told her that in that institution it was immaterial to the management whether the patient took nourishment in the usual manner through the mouth or through a Davidson syringe and a rubber catheter by way of the nose, but one route or the other was obligatory. This so obtunded her sense of "egg idiosyncrasy" that it was subsequently delightful to see her grow plump and rotund on that most efficient of all diets. I had another, who would vomit her milk with the regularity of a clock and the force of a steam injector, who decided to change her mind when she found she had to lie supine with a nurse perched on each shoulder after each intake of milk—a procedure that made mechanical vomiting impossible.

This trick of voluntary emesis is common among women and is quickly learned by some children. I have never seen a man who could accomplish the feat. These two women were not hysterical in the sense ordinarily implied by that term. Had they really been subjects of hysteria, the persuasive methods would probably have failed. Of course, if one has a practice among the pampered daughters of the wealthy, I can understand how the "egg idiosyncrasy" may sometimes loom up as a "yellow peril." One could hardly suggest a rubber catheter and a Davidson syringe to a charming young lady or an attractive young matron who was paying one \$5 a visit. I can well imagine that on certain city streets—in Baltimore, for example—it is wise to recognize this egg "bugaboo," and employ some of those expensive and fancifully labeled proprietary foods composed of milk and eggs that satisfy the patient, fool the doctor, and, in fact, work while you sleep.

In some sections of the country there is an idea rife among the feminine population that milk taken during the menstrual period will arrest the flow. The idea is as absurd as it is mysterious, yet it is capable of practical demonstration in an impressible female who has faith in the notion. Such women will often tell a credulous doctor they cannot take milk. I have met married women who expressed an aversion to milk, based upon some disagreeable association connected with a personal supply to their offspring. The "egg idiosyncrasy" is likely enough to be due to some such process of reasoning. A shallow minded woman, contemplating with painful interest the poor hen's daily act of parturition, may deep down in her heart develop a prejudice against the yellow product of delivery and thus get into a state of idiosyncratic dyscrasia. The notions of the "eternal feminine" are past finding out and often prove the downfall of the innocent practitioner.

Of the "egg idiosyncrasy," let us say "Requiescat in pace."
C. S. BRADFUTE.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE, SECTION ON GENITOURINARY SURGERY.

Meeting of November 15, 1905.

The President, Dr. RAMON GUITERAS, in the chair.

Seminal Vesiculotomy.—Dr. EUGENE FULLER said that since his last report he had operated in thirty-five cases, making a total of fifty-seven. The operation had been extremely satisfactory, and had a wider range than he at first supposed. Recently he had been doing it in cases of chronic gonorrhoeal rheumatism, and last spring he reported four such cases cured in this way. We all had known that this disease was a septic absorptive process. In a large percentage of cases he had found a marked involvement of the seminal vesicles. The first patient operated on was bedridden from the disease. Examination showed a marked involvement of the seminal vesicles. Going on the theory that they were the focus of absorption, they were cut into, curetted, and packed with gauze. In forty-eight hours the redness and swelling of the patient's feet had entirely disappeared, and at the end of two weeks in bed he was up and about. Since reporting the four cases last spring, the speaker had operated with marked success in five more cases, making a total of nine treated in this manner. Gonorrhoeal rheumatism had always been a rebellious disease to treat, drugs being of little avail, and he thought that the operation promised more than any method yet used. He did not assert that every case had its focus of absorption in the seminal vesicles, but that a great many had, and the nine patients that he had operated on were all cured. The one he exhibited was a man of twenty-five,

who had contracted gonorrhœa at thirteen. It had involved his seminal vesicles, and left a marked sclerosis in that region, all the postprostatic region being involved. For the past four years he had complained of impotence, pain in the back, and other neurasthenic symptoms. He was operated on two weeks before he was presented, and was then ready to be discharged. In doing the operation the patient was put in the knee-chest posture. Two long incisions were made, beginning well back on the buttocks, and meeting in the perineum in front of the anus. The rectum was dissected up until the vesicles were reached, the latter being recognized by the sense of touch. A grooved director was passed in along the finger, a knife slipped along the director, and the incision made in the vesicle. The interior of the vesicle was then curetted. It was not necessary to curette in all cases. Any adhesion about the vesicles should be broken up. It was not a tedious operation, requiring less than half an hour. After the vesicles were opened, they were packed with gauze, and two drainage tubes were inserted almost to the vesicles. On the sixth day everything was taken out. In some cases a tube was left in two days longer. Generally there was retention of urine for three or four days after the operation. If stricture existed, it should be stretched or operated on first. The operation did not rob the patients of anything, and they ejaculated with perfect force afterward. The range of the operation was considerable. It might be used not only in the old sclerotic cases, but in the acute cases with abscess, which could be opened and drained.

Dr. CHARLES H. CHETWOOD said he had not seen any cases of gonorrhœal rheumatism sufficiently chronic to lead him to resort to this procedure, but he was not prepared to express doubt of its efficacy. He asked in what percentage of cases it had been found necessary to extirpate the vesicles, and whether it was only in tuberculous cases, or in some of the chronic sclerotic conditions also.

Dr. ALEXANDER V. MOSCHCOWITZ said he had performed seminal vesiculectomy in three cases for tuberculosis. He had had no trouble in exposing the vesicles so they could be seen by a semilunar incision in front of the anus. He asked as to the rationale of the operation for gonorrhœal rheumatism. The results spoke for themselves, but he could not understand how the operation could cure gonorrhœal rheumatism.

Dr. FULLER said the urinary tract had received a great deal of exhaustive attention, but the sexual apparatus had been left alone. He argued for a more careful study of the disease of the sexual organs. He could not explain just why the operation cured gonorrhœal rheumatism so quickly, but he was certain of the results. In tuberculous cases the only thing to do was to remove the vesicles entirely. Vesiculotomy might give relief for a while, but he thought there was danger of disseminating the bacilli. The fistula left after such an operation on a tuberculous subject might not heal, and might cause a great deal of trouble.

Specimens of Stone in the Kidney; Tuberculous Kidney; Ruptured Kidney.—Dr. CHETWOOD presented these specimens. The first was a case of multiple stone in the kidney. The patient, a man, presented symptoms entirely in the urethra and bladder, and none in the kidney. His symptoms were those of an obstruction of the canal due to stricture and to partial retention of urine. When first seen he was passing urine very frequently, and the urine contained a large quantity of putrid, foul pus. The stricture was cut, and the bladder found to be normal. In spite of the drainage, the pus continued in the urine. Cystoscopic examination showed that the urine coming from the right side was opaque from pus. Nephrotomy was performed and fourteen stones were removed. One of the stones

was taken from the tissues outside of the kidney. The kidney was drained and the patient made a prompt and satisfactory recovery.

The second case was also one of stone in the kidney, with pyonephrosis. An x ray examination had shown the stones very beautifully. Nephrotomy was followed by recovery.

The next case was one of tuberculosis of the kidney. The patient, a woman, had had nothing but bladder symptoms. There were great tenesmus and incontinence of urine. Cystoscopy showed an ulcerated area around the right ureter. A mixed infection took place, the patient became exceedingly ill, and she then consented to an operation. Nephrotomy was first done. Then, after a nephrotomy on the left side, by which it was determined that the left kidney was sound, the right kidney was removed. The patient recovered, but still had frequency of urination.

The last specimen was one of ruptured kidney. The patient, a man, was partially run over by a truck. He declined an operation, and at the end of the fifth day he had failed materially from the loss of blood. Exploratory incision showed a complete rupture of the kidney, necessitating its removal.

Dr. MARTIN KROTOSZYNER, of San Francisco, asked why Dr. Chetwood did not determine the presence and the condition of the opposite kidney by the cystoscope, instead of resorting to exploratory nephrotomy.

Dr. JOSEPH WIENER, JR., advocated Kocher's method of palpating the opposite kidney in a case of nephrectomy by passing the hand through the peritoneal cavity. He thought the danger of infecting the peritonæum in this procedure was less than the danger of a nephrotomy on the other side.

Dr. CHETWOOD said, with reference to catheterism of the ureters, that he believed in adopting the latest methods, but, at the same time, he did not believe in being too much of a routinist. He thought sufficient information could be obtained by nephrotomy in such cases. In endeavoring to catheterize the ureters of a patient with tuberculosis of the bladder there was danger of infecting the opposite kidney. He chose the method of nephrotomy as more suitable to the case reported. In regard to the intraperitoneal operation being quicker, it did not take him over from three to five minutes to perform lumbar nephrotomy and determine the condition of the opposite kidney.

Renal Calculus and Nephritis; Decapsulation and Nephrotomy.—Dr. RICHARD H. GIBBONS reported this case. The patient, aged forty-four, a lawyer, of good habits, came for treatment in August, 1904. Two years prior to this he had complained of distress over the right kidney. His urine contained albumin, and the physical examination of the patient caused Dr. Gibbons to suspect stone. Pressure over the kidney, which was somewhat prolapsed, caused pain. The diet was regulated and the urine watched. Examinations of the urine now showed a chronic interstitial nephritis, with now and then an acute parenchymatous exacerbation. Decapsulation was recommended. The patient did not wish to have an x ray examination. He consulted Dr. Edebohls, who recommended decapsulation. The operation was done on September 19, 1904. The wounds healed primarily, and the Bright's disease disappeared. The patient afterward had vertigo, which was attributed to indican. In March he was not feeling so well. The last examination of the urine showed it to be normal. Later the examination showed only indicanuria and crystals of oxalate of calcium. Then the patient was seized with renal colic, the pain being on the left side. On the next day there was tenderness over the right kidney. Examination of the urine gave all the evidences of stone. Such a diagnosis was made, and he was x rayed and a shadow seen. Dr. Edebohls and Dr. Horace Gibbons assisted at the operation. The

kidney was exposed, and there was seen a most beautiful demonstration of the collateral circulation which Edebohl's maintained took place after decapsulation. The stone was located by palpation. An incision was made through the convex border of the kidney, and the stone found in one of the renal calices. The stone was removed and the kidney closed with sutures of catgut. A drain of silkworm gut was used. The patient made a rapid recovery, and had been perfectly well since the last operation.

Dr. FOLLEN CABOT said he presumed cystoscopy was not done in this case. A stone could sometimes be located by introducing a metallic sound into the ureter and then taking an x ray picture of the region of the kidney and ureter. Personally, he had not had any experience with decapsulation, but it seemed to be a reasonable procedure, and there were certainly a great many cases that were apparently benefited by it.

Dr. NYDEGGER said he had done decapsulation in two cases, and in one of these which came to autopsy no collateral circulation could be found. Instead, there seemed to be an absent or greatly diminished circulation. He found a thick, indurated, fibrous shell surrounding the kidney. The autopsy was done six weeks after the operation, the patient having died of anuria.

The CHAIRMAN said that in going over the reports of 120 cases it was found that in a number decapsulation cured anuria, but that in other cases this condition had apparently been brought about by the operation.

Dr. GIBBONS said he had recently performed decapsulation in a case of movable kidney where he had not intended to do it. About a year afterward the patient fell, and the kidney became loose again. He exposed the movable kidney, and found good sized bloodvessels which entered straight into the kidney substance. He had not had a single patient die from anuria. He had lost one whom he believed he would have saved had he decapsulated the other kidney. In cases in which there was temporary anuria the patients recovered after decapsulation.

The Effects of Uric Acid on the Genitourinary Tract.

—Dr. WILLIAM H. PORTER read this paper. He said the production of uric acid was a deep chemical problem, but that the effects upon the genitourinary tract were mechanical. Uric acid was one of the normal end products of proteid oxidation. Complete oxidation of the proteid bodies would be into ammonia, carbon dioxide, and water. In the human economy we had as the end products of proteid oxidation urea, uric acid, creatinin, carbon dioxide, and water. After a proteid molecule had served its purpose throughout the system it was finally brought around to one of the reducing glands, chief among which were the liver and the kidneys. In the cells of these glands it was broken up by the action of oxygen. Uric acid was formed by a process of oxidation in the cells of the kidneys. It never existed in food stuffs. It could be manufactured from the albumin of food, but it never existed in any of these. If uric acid was in the food, it would be converted into urates by the alkalies in the intestines and be absorbed as such. As urates did not exist in the blood, it was clear that uric acid did not enter through the food. Uric acid did not exist in the blood. The proteid molecule which preceded its production was in the blood, and produced the condition known as the uric acid diathesis. The condition in gout resulted from a vicarious action, the uric acid being produced quickly in the cartilage cells of the joints, following which we had the gouty attack. Then the uric acid was converted into the urates of sodium and calcium. The formation of these salts destroyed the irritation of the acid, and the attack subsided. The deposits became encapsulated. It was necessary to have uric acid produced in the kidneys, but in the normal state it was instantaneously converted into a urate. When there was

overproduction, it was present in the urine. As uric acid was formed in the kidneys it came in contact with the neutral phosphate of sodium of the blood, with the formation of the urate of sodium and the conversion of the neutral phosphate into the acid phosphate. The first step in the formation of uric acid was in the gastric follicles, where the proteid molecule lost its sulphur atom. In this connection he advanced a theory of the production of hydrochloric acid in the stomach. The overproduction of uric acid depended on (1) a deficient supply of oxygen; (2) the taking into the system of more food than could be perfectly oxidized; or (3) disturbances of the nervous mechanism. One of these factors was always present where there was an overproduction of uric acid. The first and mildest effect of uric acid on the genitourinary tract was a hypertrophic transformation of the renal cells. If the irritation was greater there was more desquamation. There was an increase in the circulation of the kidney, and this was followed by more or less interstitial change—sclerosis. The irritation of the uric acid might cause a parenchymatous, a diffuse, or an interstitial change. Instead of these, there might be a deposit of urates in the kidney, producing what was known as the gouty kidney. The urine might be highly acid, and it was intensely irritating to the urinary tract. There was a predisposition to the deposition of the earthy phosphates. There was an irritation and an overproduction of leucocytes. In other cases all the symptoms common to pyelitis would develop. It was often a source of irritation to the whole urinary tract, causing irritation of the bladder and painful urination. Treating the symptoms never removed the cause. It was necessary to go further back and reduce the overproduction of uric acid. The massing together of crystals might cause symptoms simulating those of stone. Hyperacidity, crystals, or stone would cause irritation; the two former more generally, the latter locally.

Urinary Examinations for Uric Acid, with Special Reference to the Detection of Uric Acid Calculi in the Kidney and Bladder.

—Dr. LOUIS HEITZMANN said it was a mistake to suppose that urinary examinations were simple. Many chemists did not believe that uric acid was formed in the kidneys, but that it was produced in the liver and to a small degree in the spleen. There was always a certain amount in the urine. The presence of a heavy brick dust sediment did not necessarily indicate the presence of stone or even an increased amount of uric acid. There was no element in the urine which presented under the microscope so many different aspects as uric acid did. Fresh uric acid was colorless. When it was precipitated it was supposed to have color, but sometimes it was in such minute amount that it appeared colorless. It was said to be lozenge-, wheatstone-, brush-, comb-shaped, etc., but it might be found without any of these shapes. It might occur as irregular plates, needles, rosettes, and star-shaped masses. Uric acid crystals were by no means always seen even when many stones were present. When stones were passed, irritations and inflammations of the urinary tract were sure to exist. Evidences of such irritations and inflammations of the urinary tract would be seen under the microscope. Hæmorrhages not infrequently resulted from the passage of a stone. Such a stone might be passed into the bladder, remaining there and keeping up an irritation or inflammation of the bladder for a long time. Whenever blood was found in the urine, careful examination should be made for evidences of stone. In many cases a peculiar form of uric acid would be found in the urine when stone was present. There might be conglomerations of needles, star-shaped masses, small, irregular light plates, or formations irregular in shape with needles radiating from the centre outward. These formations sometimes looked like cross sections of

stones. When these formations were seen, it could be said that stone was present, but they were not seen in all cases of stone. When the lozenge shapes were present there was no stone, but only a precipitation. The bladder had many layers of epithelia. It was lined with stratified epithelium and it had epithelia which were peculiar to it. When squamous cells only were found they were of no significance. Cuboidal cells, however, indicated a pathological condition. Columnar epithelia indicated a deep seated process. With an abundance of red blood corpuscles, scanty connective tissue, cuboidal and columnar epithelia, together with the peculiar forms of uric acid mentioned, a diagnosis of stone in the bladder would not be a mistake.

Dr. PORTER said that it was believed by some that uric acid was formed in the liver, but he thought that if we analyzed the experiment that led up to that belief we should find it to be erroneous. The experiment was performed many years ago. A man removed a goose's liver and afterward found less uric acid in the urine. Therefore he argued that the liver must be the seat of uric acid formation. On the other hand, there was the well established chemical fact that no one had ever found uric acid in the blood. If it was formed in the liver, it would come in contact with the alkalies in the blood and become a urate. Nature rarely produced a substance except at the point where it was wanted. This was true of ptyalin, pepsin, and the secretions of the pancreas. There was no occasion for uric acid until we reached the renal cells. It was necessary there to convert the neutral phosphates into acid phosphates in order to hold the earthy phosphates in solution. Dr. Porter believed all therapeutics should aim at the removal of the cause of disease. If Bright's disease was caused by the precipitation of uric acid, he failed to see how stripping off the thin capsule of the kidney would prevent the precipitation of uric acid and the destruction of the renal cells. It did not seem to him that this surgical procedure aimed at the removal of the cause. Surgeons talked about developing a highly vascular capsule. This capsule was nonvascular, and how it was expected to get a vascular one out of a nonvascular structure was beyond his comprehension. He believed a much firmer and harder capsule was produced after the operation. He doubted whether any patient was benefited by decapsulation.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Meeting of December 6, 1905.

The President, Dr. ARTHUR V. MEIGS, in the chair.

A Case of Cerebellar Tumor.—Dr. BURTON CHANCE reported this case. The patient was a man of twenty-six years, sent to him by Dr. A. C. McMullin, of Kensington, for ocular treatment. Acknowledgment was made to Dr. William Turner Van Pelt for the care of the patient in the hospital and for the later history. The patient was first seen by Dr. Chance in December, 1904, though symptoms had been first presented in April. In general the symptoms were those of intracranial tumor of the hind brain rather than of the more forward portions. They appeared to be those of irritation rather than those produced by the destruction of the basilar centres. Although the intense papillitis present was conclusive of the presence of a tumor, the indefiniteness of the other symptoms hindered the assumption that the tumor occupied the cerebellar region. The chief focal symptoms were those of deviation of the optic axes, with disturbances of direct and binocular vision and facial palsy; yet, after energetic treatment, the paresis of the left external rectus muscle, as well as the diplopia and the facial palsy, was greatly moderated, and when the man was placed upon strictly hospital regimen the general symptoms all but ceased, for there were no headaches, emesis, or mus-

cular spasms until the last course—after March 1st. The gait, station, and knee jerks were not interfered with until very late in the progress of the malady. On March 29th Dr. Wharton Sinkler was consulted and an operation decided upon. On April 7th the patient was seized with violent delirium, from which he fell into a comatose state and died four hours later. The diagnosis of cerebellar tumor was confirmed at the autopsy.

Dr. WILLIAM G. SPILLER reported that the tumor was situated upon the outer portion of the left lobe of the cerebellum, to which it was loosely attached. It was not at all infiltrating, but had made a depression in the left cerebellar lobe 2.5 cm. in depth. The tumor was very firm, almost globular, with a somewhat irregular surface, and did not appear to be adherent to the dura. It was 4 cm. in width, 5.5 cm. in length, and 5 cm. in thickness from above downward. None of the cranial nerves were implicated in the tumor. The microscopical examination showed to be a fibrosarcoma. It had caused some pressure upon the fourth ventricle and thereby moderate internal hydrocephalus of the cerebrum, although the aqueduct of Sylvius was not much dilated and the fourth ventricle not at all. The third and lateral ventricles of the brain were moderately distended, especially the posterior horn of the left lateral ventricle, the floor of which was forced upward by the pressure of the tumor upon the lower surface of the left occipital lobe.

Dr. SPILLER thought the specimen one of the greatest interest. He had never seen a tumor of the cerebellum which offered such favorable conditions for an operation as this one, situated as it was on the lateral portion of the left lobe and not penetrating the cerebellum in the least. From its location it would have been seen at once upon opening the skull, and most probably could have been entirely removed. As it was a fibrosarcoma, recurrence would not have been probable. He regarded it as a cause of deep regret that an operation was not done. It is peculiar that there was involvement of the left external rectus, because none of the cranial muscles were affected. That improvement ensued under iodide and mercury was not indicative of gumma.

Successful Suture of a Penetrating Wound of the Heart.—Dr. JOHN H. GIBBON reported the case of a colored man, aged thirty-eight, admitted to the Bryn Mawr Hospital July 30, 1905. On admission he was unconscious and presented all the typical symptoms of compression of the heart from bleeding into the pericardium. The pleura was not injured. A knife had severed transversely the fourth costal cartilage. This cartilage with a part of the rib was resected, the pericardial wound, measuring three quarters of an inch, enlarged, and a wound of the right ventricle near the auriculoventricular groove discovered which measured from half to three quarters of an inch. This wound was closed with four chromic gut sutures passed on an intestinal needle. The passage of these sutures was greatly facilitated by the introduction of a traction suture by means of which the heart could be drawn well up to the surface. No attempt was made in introducing the sutures to avoid the endocardium. It had been shown, however, that it was extremely difficult to open the endocardium even when one tried to do so. The pericardium was drained with gauze and no sutures were introduced either into the pericardium or into the external wound. The patient made an absolutely uneventful recovery, except that on the second day after the operation there was considerable distention of the pericardium by fluid, which did not escape because of the dryness and adhesion of the gauze packing. When the packing was removed there was a gush of this fluid. No reaccumulation took place, as subsequently moist dressings were employed. The pericardium healed without suture in about eight days. The external wound was sutured, except for a small point for

drainage on the sixth day. The patient was about the ward on the fourteenth day, and on the twentieth day left the hospital with the wound entirely closed except for superficial granulations. On September 10th the patient returned to his work as a master plumber and had not missed a day since. He was now perfectly well, with heart sounds normal and regular. Although the wound healed by granulation, there was never any pus and the patient's temperature after the second day was practically normal.

Dr. GIBBON believed that this was the fifth successful case reported in this country. Although the first successful operation was done in 1896, since then about 100 operations for stab wound of the heart had been reported, with a recovery of from thirty-five to forty per cent. He urged that in the event of question of injury of the heart an exploration should be made just as in questionable wounds of the abdominal wall. In future cases he would close the pericardium and only drain the external wound. Extensive osteoplastic resections for exposure of the heart were not approved of, unless the pleura was shown to be injured. In this case he had ample room for manipulation after the sub-periosteal resection of the cartilage and a portion of the rib. This was Dr. Gibbon's second case of suture of a heart wound. The first patient died on the table after the introduction of one suture.

Dr. FRANCIS T. STEWART said it was not an easy matter to tell the character of the wound from the heart beat. He referred to a case presented to the college a year ago by himself, and since that time he had seen three cases of wounds in the vicinity of the heart. The safest plan with wounds in the neighborhood of the heart was exploration. If necessary there should be resection of the rib above and below. There had been cases in which the operator had opened the pericardium, but, failing to find the wound in the heart, closed the chest, with death as a result. He considered infection as a large factor in delaying convalescence and causing fatal results. One of the greatest objections to the introduction of gauze or a tube into the pericardium was the possibility of adhesions.

Dr. JAMES TYSON referred to a case of resection of the rib in which the proximity of the heart to the posterior chest wall seemed immediate.

Dr. JAMES C. WILSON thought the possibility of adhesions not of sufficient importance to deter the surgeon from draining. He referred to the fact that more or less extensive pericardial adhesions occurred after various kinds of pericarditis without much modification of the physical signs in the præcordial area or in the circulatory signs.

Dr. J. ALLISON SCOTT referred to a paper presented about a year before by Dr. LeConte and himself, upon the medical and surgical aspects of pyopericarditis, in which were cited four cases. Three of the patients were operated on and recovered. All had been drained. From his observations of the præcordial area since the operation he was not convinced that the heart really became adherent, and he agreed with Dr. Wilson that drainage should be instituted if indicated.

Dr. JOSEPH SAILER thought the safest treatment in these cases was invariably surgical. This was the result of his experience with two cases. He thought that the formation of a blood clot offered more injury to the patient than an exploratory operation and drainage of the pericardial cavity after repair of the heart wound.

Dr. GIBBON thought that if drainage of the pericardium could be avoided, it should be. Unless infection was pretty surely indicated, he would not drain, not for fear of adhesions, but because of the greater risk offered than by closing the pericardium and draining only the external wound.

Book Notices.

On the Nature, Causes, Variety, and Treatment of Bodily Deformities, in a Series of Lectures Delivered at the City Orthopædic Hospital in the Year 1852 and Subsequently. By the Late E. J. CHANCE, F. R. C. S., Eng., Surgeon to the City Orthopædic Hospital, etc. With Illustrations Drawn on Wood by the Author from Cases in His Own Practice and Many Additional Drawings and Copious Notes from Cases in the Editor's Practice. Edited by JOHN POLAND, F. R. C. S., Eng., Surgeon to the City Orthopædic Hospital, etc. Second Edition, in Two Volumes. Vol. I. London: Smith, Elder, & Co., 1905. Pp. xlviii-315.

It is certainly a hazardous experiment, from the point of view of popular interest, to republish lectures on any medical topic delivered over fifty years ago. The six lectures in the present volume are concerned almost entirely with the classification and ætiology of deformity. While historically interesting and valuable, they can hardly be said, even with Mr. Poland's notes, to reflect the present state of our knowledge. Mr. Chance was evidently an excellent observer, and made good use of his exceptional opportunities for noting cases of interest, but the book will give little satisfaction on the shelves of the practical surgeon of to-day, however valuable to the student of the surgical thought of a half century ago.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the week ending February 23, 1906:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
California—Los Angeles.....	Feb. 3-10.....	2	
California—San Francisco.....	Feb. 3-10.....	13	
Florida—Jacksonville.....	Feb. 10-17.....	9	
Georgia—Augusta.....	Feb. 12-19.....	10	
Louisiana—New Orleans.....	Feb. 10-17.....	17	
Maine—Biddeford.....	Feb. 10-17.....	1	
Maryland—Baltimore.....	Feb. 10-17.....	4	
Michigan—Ann Arbor.....	Feb. 10-17.....	1	
Missouri—St. Louis.....	Feb. 10-17.....	3	
Montana—Missoula County.....	Jan. 1-31.....	1	
Montana—Silverbow County.....	Jan. 1-31.....	1	
Nebraska—South Omaha.....	Feb. 10-17.....	2	
New York—Buffalo.....	Jan. 1-31.....	1	
New York—New York.....	Feb. 10-17.....	1	
Ohio—Cincinnati.....	Feb. 9-16.....	9	
Tennessee—Knoxville.....	Feb. 10-17.....	1	
Wisconsin—Appleton.....	Feb. 10-17.....	2	
Wisconsin—Milwaukee.....	Jan. 27-Feb. 3.....	1	
Smallpox—Foreign.			
Brazil—Bahia.....	Dec. 8-30.....	25	2
Brazil—Pernambuco.....	Jan. 1-15.....	43	1
Brazil—Rio de Janeiro.....	Jan. 7-28.....	15	1
Chile—Antofagasta.....	Jan. 18-Feb. 1.....	34	17
Chile—Coquimbo.....	Jan. 18-Feb. 1.....	3	
China—Canton.....	Dec. 25-31.....	40	
China—Hongkong.....	Jan. 6-13.....	1	
China—Shanghai.....	Dec. 30-Jan. 6.....	1	2
France—Paris.....	Jan. 27-Feb. 3.....	12	
Great Britain—Bristol.....	Jan. 27-Feb. 3.....	5	
Greece—Athens.....	Jan. 15-22.....	1	
India—Bombay.....	Jan. 16-23.....	5	
India—Calcutta.....	Jan. 6-13.....	55	
India—Karachi.....	Dec. 26-Jan. 2.....	3	
India—Madras.....	Jan. 13-19.....	12	
India—Rangoon.....	Jan. 6-13.....	14	
Italy—General.....	Jan. 25-Feb. 1.....	39	
Mexico—Tuxpam.....	Jan. 31-Feb. 13.....	5	
Russia—St. Petersburg.....	Jan. 20-27.....	5	
Yellow Fever—Foreign.			
Brazil—Rio de Janeiro.....	Jan. 7-28.....	8	6
Ecuador—Guayaquil.....	Jan. 8-28.....	20	12
Cholera—Insular.			
Philippine Islands—Manila.....	Dec. 23-Jan. 6.....	5	5
Philippine Islands—Provinces.....	Jan. 11.....	Present.	
Cholera—Foreign.			
India—Calcutta.....	Jan. 6-13.....	61	
India—Madras.....	Jan. 13-19.....	1	
India—Rangoon.....	Jan. 6-13.....	1	
Plague—Insular.			
Philippine Islands—Manila.....	Dec. 23-30.....	1	1

		Plague Foreign.			
Brazil	Pernambuco	Jan. 8-15	2		
Brazil	Rio de Janeiro	Jan. 7-28	9		
Chile	Antofagasta	Jan. 18-Feb. 1	2		
China	Hankow	Jan. 6-13	2		
India	Calcutta	Jan. 6-13	1,351	1,140	
India	Bombay	Jan. 16-23	31		
India	Calcutta	Jan. 6-13	16		
India	Karachi	Dec. 26-Jan. 2	9		
India	Madras	Jan. 13-19	7		
India	Moulmein	Jan. 20	1		
India	Rangoon	Jan. 6-13	18		
Japan	Kobe	Dec. 9-Jan. 11	36	30	
Japan	Kobe	Jan. 13-20	3	2	
Japan	Osaka	Dec. 9-Jan. 11	73	62	
Peru	Callao	Jan. 12-25	1		
Peru	Lima	Jan. 12-25	7	5	
Peru	Mollendo	Jan. 12-25	6	2	
Peru	Paita	Jan. 12-25	1		
Peru	Trujillo	Jan. 12-25	25	10	

Public Health and Marine Hospital Service:

List of Changes of Stations and Duties of Commissioned and Noncommissioned Officers of the Public Health and Marine Hospital Service for the seven days ending February 21, 1906:

BURKHALTER, J. T., Passed Assistant Surgeon. Granted seven days' extra leave of absence from February 24, 1906.

CURRIE, D. H., Passed Assistant Surgeon. Department letter of July 27, 1905, amended so as to grant Passed Assistant Surgeon Currie twenty-one days leave of absence from July 18, 1905, instead of two months.

FRISSELL, C. M., Acting Assistant Surgeon. Granted twenty days' leave of absence from February 14, 1906.

HALLET, E. B., Acting Assistant Surgeon. Granted five days' leave of absence from February 19, 1906.

MOORE, DUNLOP, Passed Assistant Surgeon. Relieved from duty at Yokohama, Japan, and directed to proceed to Honolulu, Hawaii, reporting to Chief Quarantine Officer for duty.

ROSENAU, M. J., Passed Assistant Surgeon. Detailed to attend meeting of committee of American Bacteriologists, in New York, N. Y., February 24, 1906, relative to the standardization of tetanus antitoxic sera.

TOWNSEND, F., Acting Assistant Surgeon. Granted seven days' leave of absence from February 21, 1906.

WALERIUS, M., Pharmacist. Department letter of January 30, 1906, amended so as to grant Pharmacist Walerius thirty days' leave of absence from February 8, 1906, instead of February 15, 1906.

Board Convened.

Board of Officers convened to meet at the Bureau February 27, 1906, for the purpose of making physical examination of an officer of the Revenue Cutter Service; detail for the board, Assistant Surgeon General W. J. Pettus, Chairman; Assistant Surgeon J. W. Trask, Recorder.

Appointment.

Albert J. Nute appointed Acting Assistant Surgeon for duty at Port Huron, Michigan. February 20, 1906.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending February 24, 1906:

KIEFFER, CHARLES F., Major and Surgeon. Left Fort D. A. Russell, Wyoming, on ten days' sick leave of absence.

KIRKPATRICK, THOMAS J., Captain and Assistant Surgeon. Left Fort Moultrie, S. C., on ten days' leave of absence.

McCaw, W. D., Major and Surgeon. Leave of absence extended until such time as will enable him to rejoin station after return of the transport *Sumner* to New York city.

REILLY, JOHN J., First Lieutenant and Assistant Surgeon. Retired from active service with the rank of captain, on account of disability incident to the service, to date from February 4, 1906.

RUFFNER, E. L., First Lieutenant and Assistant Surgeon. Left Columbus Barracks, Ohio, with recruits *en route* to Fort Worden, Washington.

STEER, SAMUEL L., Captain and Assistant Surgeon. Ordered to accompany troops B and M, 3rd Cavalry, from Fort Assiniboine, Montana, to Presidio of San Fran-

cisco, Cal.; upon completion of this duty, will return to station.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 24, 1906:

TYREE, F. W., Acting Assistant Surgeon. Detached from the naval training station, San Francisco, Cal., and ordered to the naval recruiting station, Kansas City, Mo.

Births, Marriages, and Deaths.

Married.

CHAMBERLIN—YALE.—In Minneapolis, on Thursday, February 15th, Dr. Jehiel Weston Chamberlin and Mrs. Jane Huntington Yale.

CUMMINGS—REYNOLDS.—In Brookline, Massachusetts, on Monday, February 19, Dr. Robert Cummings and Miss Harriet A. Reynolds.

HAMMOND—WARD.—In Niles, Michigan, on Tuesday, February 6th, Dr. H. L. Hammond and Miss Cora Ward.

HISS—DOW.—In Brooklyn, N. Y., on Tuesday, February 13th, Dr. Philip Hanson Hiss, Jr., and Miss Caroline Dow.

MANNING—GRIGGS.—In Washington, D. C., on Sunday, February 18th, Dr. Herbert Miller Manning, assistant surgeon, United States Public Health and Marine Hospital Service, and Miss Edith Young Griggs, of the Army Nurse Corps.

McCAFFERTY—GROVE.—In Philadelphia, on Sunday, February 18th, Dr. George W. McCafferty and Miss Esta Mae Grove.

SALISBURY—HUTCHINS.—In Buffalo, N. Y., on Monday, February 12th, Dr. Stafford C. Salisbury and Miss Helen Hutchins.

Died.

BACKUS.—In Rochester, N. Y., on Saturday, February 10th, Dr. Ogden Backus, aged forty-eight years.

BULLARD.—In New York, on Wednesday, February 21st, Sibel Duff Bullard, wife of Dr. William M. Bullard.

BERGEN.—In Utica, N. Y., on Friday, February 16th, Dr. Thomas J. Bergen, aged seventy-three years.

BLAKE.—In Springfield, Massachusetts, on Thursday, February 15th, Dr. Warren P. Blake, aged forty-seven years.

CALVIN.—In Jamestown, Pennsylvania, on Monday, February 19th, Dr. Robert Calvin, aged thirty years.

DAVIS.—In Worcester, Massachusetts, on Saturday, February 17th, Dr. Wesley Davis, aged sixty-five years.

FAWDREY.—In Watertown, N. Y., on Tuesday, February 13th, Dr. David Fawdrey, aged sixty-eight years.

FOULKE.—In Milwaukee, on Saturday, February 10th, Dr. Joseph Foulke, aged seventy-nine years.

FRIEDRICHS.—In New Orleans, on Friday, February 9th, Dr. Philip J. Friedrichs, aged sixty-six years.

GRANT.—In Bath, N. Y., on Saturday, February 17th, Dr. Benjamin Franklin Grant, aged eighty years.

GREGORY.—In Ormand, Florida, on Sunday, February 11th, Dr. Elisha Hall Gregory, of St. Louis, Missouri, aged eighty-two years.

HAHN.—In Baltimore, on Wednesday, February 14th, Dr. William A. Hahn, aged forty-nine years.

HARRIGAN.—In Brooklyn, N. Y., on Wednesday, February 14th, Dr. Warren Elliott Harrigan, aged forty-three years.

LUNDBECK.—In Brooklyn, N. Y., on Friday, February 16th, Abbie J. Lundbeck, wife of Doctor Lundbeck.

MARTIN.—In Easton, Maryland, on Tuesday, February 13th, Dr. Thomas Martin, aged eighty-two years.

MCDONALD.—In New York, on Thursday, February 22nd, Dr. Charles McDonald, aged eighty-one years.

McGOVER.—In Tomnolen, Mississippi, on Friday, February 16th, Dr. James McGover, Jr., aged twenty-four years.

STONE.—In Metamora, Michigan, on Tuesday, February 13th, Dr. G. W. Stone.

WRIGHT.—In Troy, N. Y., on Saturday, February 10th, Dr. Thomas Goldsmith Wright, aged thirty-two years.

New York Medical Journal

INCORPORATING THE

Philadelphia Medical Journal and The Medical News

A Weekly Review of Medicine

VOL. LXXXIII, No. 10.

NEW YORK, MARCH 10, 1906.

Whole No. 1423

Original Communications.

CORRECTION OF DEFORMITY RESULTING FROM HIP DISEASE.

By DEXTER D. ASHLEY, M. D.,

NEW YORK,

CHIEF SURGEON OF THE ORTHOPAEDIC DEPARTMENT, GERMAN POLICLINIC; SURGEON TO ST. MARK'S HOSPITAL, ETC.

There seems to be a dearth of information and lack of knowledge of the mechanical processes involved in the correction of the deformities due to hip disease, perhaps owing to the fact that recent contributions to the literature of the subject have not reached the profession in general. Yet in no other deformity can the orthopaedic surgeon render so much assistance to his patient in so short a time and with so little danger as in these quiescent cases with considerable apparent shortening.

Few physicians comprehend how a limb apparently six or seven inches short, made so by contraction in adduction (see Fig. 1) and flexion (see Fig. 2) can be made equally as long as its fellow. Very frequently the greater part of this shortening is apparent, not real, and is overcome by the elimination of the contractions of adduction and flexion. As to the real shortening, the fact is that many persons with one limb from one half to three quarter inches shorter than the other are only made aware of the fact by actual measurement, this unequal development of the limbs being entirely compensated by the tilting of the pelvis. An adult may test this by placing a book two inches in thickness upon the floor and standing erect upon it with the left foot, resting the right foot upon the floor. The pelvis will be tilted, producing an adduction and apparent shortening of the left limb, and an abduction and apparent lengthening of the right limb, the shortening of the adducted limb being compensated by the thickness of the book. Now it is evident that if we had an actual shortening of the right limb amounting to two inches, this actual shortening would be compensated in the same way by the tilting of the pelvis and abduction of the right limb and consequent adduction of the left.

Most of these contracted limbs, or "short legs," are due to tuberculous disease, while others are due to rheumatism, gonorrhoea, morbus coxae senilis, acute infectious arthritis, syphilis, or badly treated fractures. The common history of these cases is

that patients have been assured that nothing could be done for them; that they must wear an iron elevation or special shoe; that it would be impossible to make a short limb longer, and that they would better let well enough alone. So that many go through life limping distressfully, and suffering various pains and nervous disturbances induced by the deformity, who might be able to walk with hardly a perceptible limp and no deformity.

In this paper a classification is suggested, based upon the position of the proximal end of the femur, modified by the presence of motion or ankylosis, extent of shortening, age of the patient and cause of disease. This grouping is, of course, suggestive, not absolute. It has been found useful as a working basis, though not faultless, as one group extends into and infringes upon the other, and it is sometimes difficult to ascertain by the shortening, without a good x ray picture, to which one of these groups a given case belongs.

Group A, the proximal end of the femur rests well within the acetabulum.

Group B, the proximal end of the femur rests near or upon the rim of the acetabulum.

Group C, the proximal end of the femur lies one inch or more without the acetabulum.

Group A includes cases in which the limb is held, generally, in a position of flexion and adduction, sometimes in abduction. If the disease was active in childhood or early adolescence, more or less atrophy and real shortening will be present due to the progress of the disease within the bone, and the non-functionating of the limb while wearing a brace or crutch. If the disease originated in late adolescence there will be very little actual shortening. Motion may be slight or nil. If there is ankylosis, it may be fibrous or bony.

Group B includes cases with more or less deformity and actual shortening, this shortening being due to destruction of the head and neck of the femur, acetabular disease, a perambulating acetabulum, to nondevelopment, or to all these causes combined. There may be considerable motion or ankylosis.

Group C includes cases with real shortening varying from one to three or more inches, the proximal end of the femur lying upon the dorsum ilii. There may be a distinct luxation. The pathology is the same as in the former groups.

In group A, if there is perceptible motion, and barring acetabular disease and morbus coxae senilis, the Lorenz centric method of forcible correction under ether usually commends itself, preceded, it

may be, by a rest in bed with extension and counter extension to secure immobilization and relaxation of muscles.

OPERATION: The head of the femur is grasped with one hand and the flexed knee with the other,



FIG. 1.—Adduction of left hip, of ten years' duration; no real shortening; apparent shortening, 4 inches; adduction, 40 degrees; flexion, 10 degrees.

the operator making gradual extension in the direction of superextension and abduction, with alternate relaxation and gradual application of force. As the soft, contracted parts become tense they are massaged. If they are very resistant they are divided by subcutaneous tenotomies. The limb is further abducted and extended until it reaches a position of 180° of extension and from 35° to 45° of abduction (if tuberculous) or in a more comfortable walking position if the deformity was due to other than tuberculous disease.

A free use of the tenotome is to be commended in these cases, since in exerting any considerable stretching force, even with the best massage, we must use the head of the femur as the fulcrum of the lever, with consequent abnormal pressure upon the head and acetabulum, which is to be avoided in cases of tuberculous hip disease.

If considerable resistance is encountered at the first sitting, it is well not to use too much force, but to put the limb in plaster of Paris in the attained position. Generally within two or three weeks the deformity may be further corrected with but little force.

One must be patient in attempting forcible correction, as frequently a firm resistance to the further extension of the limb will give way in two or three sittings.

Having overcome the deformity so far as advisable, a well fitting stockinet drawer is applied with a scratch band beneath. It is necessary to adjust a dressing that will hold the limb in the acquired position. The most practical, and in skilled hands the most efficient, is the plaster of Paris spica

or double spica, extending from the twelfth rib and including the entire limb and foot of the diseased side, and a double spica to the knee of the sound side.

A pelvic support holds the patient by pressure upon the sacrum, the thorax and head resting upon a cushioned box, each limb being held by an assistant, the sound limb in 180° extension, without abduction or adduction, the assistant making upward pressure. The other assistant holds the diseased limb in the attained position and makes traction in abduction and superextension. If you have a Lorenz hip retroussier these two assistants may be dispensed with, as the machine holds the patient more accurately.

Over the stockinet are applied three or four layers of sheet wadding bandages, or a flannel binder, the anterior superior spine and inner condyle being somewhat further protected, if very prominent. The plaster is applied very snugly over this, with especial care in making a close fitting pelvic band, moulding the plaster over the anterior superior spines. The anterior bridge over the symphysis pubis should be strengthened by many reverses, and the spica may be further strengthened by incorporating one or two pieces of basswood, wire screening, or two pieces of flexible steel, one in front and one behind extending from the top of the pelvis almost to the knee. A double spica should have a knee bridge (Fig. 3, b). A good spica for an adult

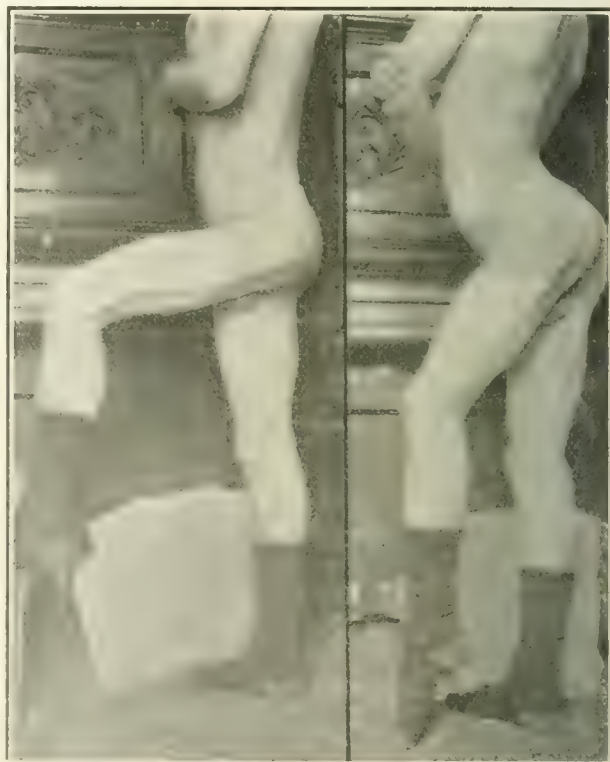


FIG. 2.—Flexion of left hip of thirty-six years' duration; abscesses until thirteen years of age; real shortening, 0.25 inch; apparent shortening, 6 inches; flexion, 80 degrees; adduction, 10 degrees; a, before operation; b, after operation.

should be about one inch thick over the symphysis pubis and about one fourth of an inch thick over the thigh. The operator should take care not to over extend the knee, as this is a painful position,

but put it up straight. Care should be taken to place the foot in the right angle position, the point of insertion of the tendo Achillis being well padded. The plaster is trimmed, and everted sufficiently on the upper edge to relieve pressure over the viscera,



FIG. 3.—Double hip disease: a. before operation; b. six weeks after operation.

leaving an anterior bridge from two and a half to three and a half inches wide according to the size of the patient, and a posterior bridge from four to six inches wide. After a close application it is well to cut out a fenestra over the patella avoiding a bursitis, and also make a fenestra at the insertion of the tendo Achillis for the same reason. The latter is very necessary, as the patient will complain bitterly if it is not done.

After two weeks, if there is no temperature and no pain upon foot pressure, the thigh plaster of the sound side may be removed permitting flexion of the thigh to the right angle position, and at the same time the leg and foot plaster of the diseased side, permitting flexion at the knee, being careful to retain the portion over the inner condyle, thus maintaining abduction. The patient may then be permitted to get out on crutches, gradually using the limb in weight bearing (see Fig. 4).

The patient may experience discomfort from a swelling of the leg and foot, when first using the limb, immediately after the removal of the plaster. The longer the plaster has been worn, the more marked will be the swelling. This is to be treated by elevation and massage.

In adult cases, should there be considerable resistance, it being apparently impossible to place the limb in sufficient abduction and extension of 180° , it is well to perform an osteotomy at the point of the lesser trochanter at the first sitting, as a matter of convenience in getting the patient out of the hospital in a definite length of time. In young, rapidly growing patients, because of the tendency to relapse, osteotomy should not be resorted to unless

there is bony ankylosis, which is rarely the case. If the patient is fat, the anterior superior spines so covered as to make it impossible to procure a firm hold upon the pelvis, and if there is considerable resistance, and it is very difficult to hold the limb after forcible correction by means of the plaster of Paris spica, it is better not to attempt forcible correction, but to make liberal tenotomies and osteotomy at the point of the lesser trochanter, including the sound leg in plaster down to the knee.

OPERATION: To perform the osteotomy at the point of the lesser trochanter, the patient should be prepared as for any surgical operation. In children the osteotomy may be done subcutaneously with rapidity and safety, after the manner of Gant, with a Vance osteotome. In older patients, where there has been a great deal of osseous deposit, most surgeons will prefer a small opening with an elevation of the periosteum and the removal of a cuneiform section of bone, the base of which should be on the external surface and the apex half way through the bone. The osteotome is then driven inward and downward sufficiently through the inner cortex to permit of a slightly oblique fracture by means of a quick motion in adduction and flexion. This will give a shoulder for the lower fragment, and control the slipping inward and forward when overcoming the adduction and flexion, while shortening due to the removal of bone substance is reduced to the minimum.

As soon as the fracture is produced we leave to the assistant the care of the wound and the performance of additional tenotomies, the operator giving his attention to straightening the limb, making strong



FIG. 4.—Plaster dressing of the sound side removed two weeks after operation.

extension to 180° , and abduction 45° in tuberculous cases, being careful to keep the parts in apposition and avoid any inward rotation of the limb which is facilitated by the lax knee capsule so frequently present. Keep the patient squarely upon the pelvic

rest. Unless strict attention is given to this, you will find the limb rotated inward when you remove the plaster.

After flushing with water, 120° F., the wound is partially sewed up, a gauze packing is made to control the hæmorrhage, and a double plaster spica is applied over sheet wadding. This gauze packing is

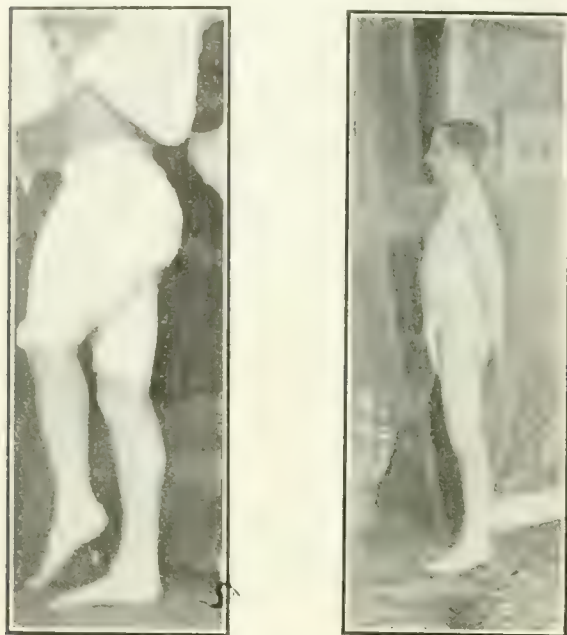


FIG. 5.—Ankylosis of the right hip: a, before operation; b, after operation.

removed in 36 hours through a fenestra, and is followed by another smaller gauze packing, without irrigation. These dressings are repeated every two or three days according to indications.

After two weeks, the wound having closed, the first plaster is removed. The position of the limb is examined, and any necessary corrections can be made. The plaster is again applied over stockinet, as after a centric correction, when the patient may get out of bed on crutches. The leg and foot plaster is retained on the corrected limb. After from four to six weeks more the plaster is again removed. Conditions being found satisfactory, a single spica is applied extending to the knee, and the patient sent home. The time of confinement in the hospital is generally from four to eight weeks (see Figs. 5, 6, 7, 8).

Should there be an ankylosis, which according to the x ray appears to be bony, and under the anæsthetics unyielding, we may resort to the ilio-femoral osteotomy, after the method of Lorenz, provided the x ray does not reveal too great a mass of bone substance at this point.¹ This is the ideal procedure.

Through an incision commencing at the top of the great trochanter and extending upward and inward to the junction of the proximal end of the femur with the ilium, an osteotome is inserted be-

tween the parted muscles, and then driven in parallel with the sloping side of the pelvis, with the idea of producing an osteotomy at the point of ankylosis. Cut all contracted and considerably shortened muscles by subcutaneous tenotomies, and bring the limb into extension 180° and abduction sufficient to make an apparent lengthening of from one half to one inch. The plaster is applied as after the osteotomy described above. After from four to six months all support may be removed (see Fig. 9).

In group B, also, forcible correction may be employed in selected cases, there being an inconsiderable luxation and the patient not too fat. These patients suffer severe pain after forcible correction. Where this has been the case, or where unsatisfactory progress is made in correction for any reason, we find it is better, especially in adult cases, to resort to an osteotomy at the second sitting. In young and rapidly growing patients an osteotomy is to be avoided as in group A.

Should there be a complete and unmistakable bony ankylosis, it is advisable to perform the ilio-femoral osteotomy as explained above. If there is only a fibrous ankylosis we may correct by force, yet it is better generally to do an osteotomy at the point of the lesser trochanter, not breaking up the ankylosis.

In group C, there being a shortening exceeding one inch, the forcible correction is recommended only in childhood and early adolescence in order to give a functioning member, thereby insuring a



FIG. 6.—Ankylosis of the left hip; a, before operation; b, eighteen months after operation.

better development. A rapidly growing patient is likely to have a recurrence of the deformity unless followed with particular care for a much longer time than is necessary with older patients. If we can partially correct the deformity, and get an ankylosis, we will later find a strong limb upon

¹ I hesitate to resort to this operation unless I know that there is a good bony ankylosis. Many of my cases that were very resistant, the ankylosis apparently being fibrous, osteotomies were performed at the point of the lesser trochanter, surprised me by recovering motion of from ten to fifteen degrees after being in plaster for from six to eight months. One patient, whose case I shall report, has quite normal motion. (Case IV.)

which we may perform an osteotomy. On the other hand, finding an unyielding deformity even in these young patients, perform subcutaneous tenotomies and an osteotomy with a Vance osteotome, keeping the patient in plaster down to the knee for from eighteen months to two years. In late adolescence or in adult cases, where there is no motion, an



FIG. 7.—Operation by osteotomy and subcutaneous tenotomies: a, before operation; b and c, after operation.

osteotomy at the point of the lesser trochanter should be performed, with as little disturbance to the parts as possible. Where bony ankylosis is unmistakable and not too excessive, we may perform the iliofemoral osteotomy.

To summarize: Experience would seem to indicate attention to the following points:

1. Careful individualization of cases with regard to operative procedure, taking into consideration the causes of the disease, the position of the proxi-

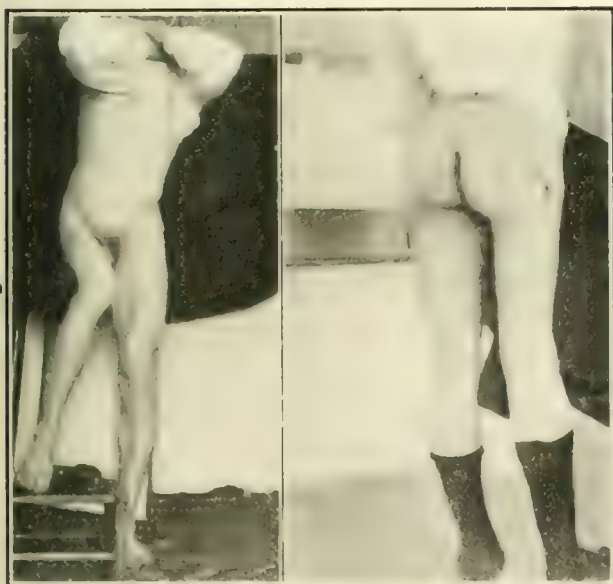


FIG. 8.—Operation by subtrochanteric osteotomy: a, before operation; b, after operation.

mal end of the femur, the age of the patient and the nutrition (as fat or lean).

2. Position of the limb after operation:

After forcible correction: Extension 180° , abduction 45° , double spica for from two to six weeks, limb retained in a plaster dressing for from one to

two years. After osteotomy: With ankylosis, extension 180° , abduction to slight apparent lengthening. Retained for from eight to twelve weeks in plaster. With motion: Extension, 180° , abduction, to 45° , wearing plaster for from twelve to eighteen months, or longer if the child is growing rapidly.

Other things being equal, the child or adolescent will always wear a plaster longer than an adult.

The following cases illustrate the different conditions and varied treatment:

CASE I.—A boy, seventeen years of age, with deformities due to double hip disease. He had had many abscesses, which were healed. He had worn no brace, and had had pain since he was six years of age. The left limb measured 27 inches from the anterior superior spine to the inner maleolus; the right limb, 31 inches. The left limb was in abduction 25° , flexion 60° , and was ankylosed with a large, bony mass. The right limb

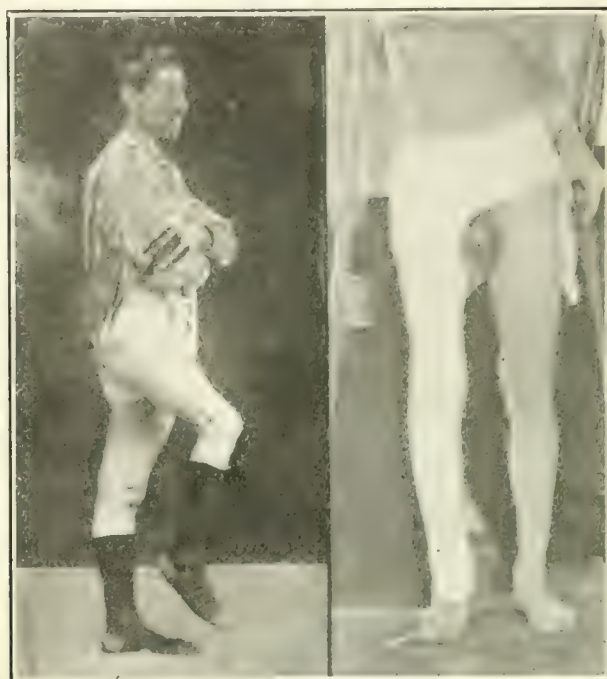


FIG. 9. Ilio-femoral osteotomy: a, before operation; b, after operation.

was in adduction 15° , flexion 20° , and had motion of 20° . The left knee had many scars, and was in flexion of 30° . The left trochanter major was near the ischial tuberosity. The right trochanter major was about one inch above Nélaton's line. The patient walked with crutches.

Operated on May 13, 1903, by an osteotomy on the left side at the lesser trochanter, correcting the flexion and some of the abduction, leaving the knee flexed as before, since any attempt to correct the position would force the fragments to overlap. A centric operation was done on the right hip, correcting flexion and adduction. A double plaster of Paris spica was applied, including the feet. The recovery was uneventful. The patient was discharged from the hospital July 2nd. The knee was straightened November 25, 1903, and patient was again discharged from the hospital on December 24th.

The last hip plaster was removed one year after the operation. The knee plaster was worn somewhat longer. He walks to-day with a cane.

CASE II.—A girl, eight years of age, with deformity of the left hip, producing an apparent shortening of two inches and a real shortening of $\frac{7}{8}$ of an inch. The

flexion was 15°. There was slight motion, and the limb was rotated outward.

A centric correction was performed April 24, 1903. In May, 1904, the plaster cast was removed for a time, but finding slight spasm of the muscle, the cast was reapplied. The plaster was removed in August, 1905. Patient walks with scarcely a limp. (Fig. 4.)

CASE III.—A male patient, twenty-one years of age, whose disease commenced in his sixteenth year. Examination revealed an apparent ankylosis of the right hip. He had had no abscesses. There was slight, if any, real shortening. There was an adduction of 50°, flexion of 90°, and apparent shortening of six inches. He walked with a cane, with a distressing gait, and complained of great inconvenience and pain in his back. The disease was probably tuberculous.

He was operated upon January 20, 1903. Under the anæsthetic there was 10° of motion, accompanied by a distinct grating sound, as of denuded cartilage. A subtrochanteric osteotomy was performed, taking out a small wedge. The leg was abducted until 1.5 inches longer than its fellow. The recovery was uneventful, the patient leaving the hospital on February 17th wearing a plaster cast which enveloped the entire limb and foot. One month later a new plaster cast was applied extending to the knee. At first the patient experienced considerable pain from swelling of the leg, and in the use of the ankle and knee. Six months after the operation the entire plaster cast was removed. Two months later he offered to walk a race to the battery. On December 1, 1905, he reports almost normal motion, the limb being about .25 inch short. He leads a very active life (Fig. 5), has hardly a limp and almost normal motion.

CASE IV.—A woman, thirty-three years of age, had left hip disease at seven years of age. Examination revealed an apparent shortening of 4.5 inches, and a real shortening of 2 inches; flexion 35°, adduction 30°. There was apparent ankylosis.

A subtrochanteric osteotomy was performed in September, 1903. Observation eighteen months afterward (Fig. 6) showed excellent position and surprisingly good motion. The plaster was removed one year after operation.

CASE V.—A man, twenty years of age, suffered from right hip disease at thirteen years of age. The examination revealed .75 of an inch real shortening, and apparent shortening of 6 inches due to flexion of 45° and adduction of 50°. The patient measured 6 feet $\frac{1}{2}$ inch when standing upon his sound limb, and was very muscular.

An operation was performed by osteotomy and subcutaneous tenotomies in January, 1905. Plaster was removed in July. The result has been highly satisfactory to the patient. (Fig. 7.)

CASE VI.—A man, twenty-five years old, right hip disease at five years of age. Examination showed $2\frac{1}{8}$ inches real shortening, and apparent shortening of 5 inches; flexion 60°, adduction 25°; apparent ankylosis; thickening and pain around the great trochanter, the apparent shortening gradually increasing.

An operation was performed May 15, 1904, by subtrochanteric osteotomy. Plaster was removed December 3, 1904. There is now no apparent shortening, pain, or inconvenience in walking. (Fig. 8.)

CASE VII.—A man, twenty-nine years old. Right hip disease at eleven years of age. Examination revealed a bony ankylosis, real shortening of 1.5 inches, apparent shortening, 7 inches, flexion 60°, adduction 20°.

An iliofemoral osteotomy was performed in February, 1904. The plaster was removed in July, 1904. (Fig. 9.) The patient is now an engineer and fireman for a large building.

337 LEXINGTON AVENUE.

ON SPORADIC TRICHINOSIS.

By DAVID BOVAIRD, JR., M. D.,

NEW YORK.

(Concluded from page 440.)

CASE X.—Male patient, 30 years of age, married, iceman, born in Austria. He was admitted September 22, 1905, and discharged October 7, 1905. Family and previous personal history are entirely negative. His present illness began two weeks before admission with pain in the abdomen, a dull pain as if there were air in the stomach. The bowels moved two or three times in a day, loose, watery movements. He had no chills or fever, but felt weak. One week ago he took to bed. At the same time he noted swelling about his eyes and at night had burning sensations in his eyes. He also at this time noted some slight pains in his pectoral muscles. The diarrhoea has continued. His appetite has been good. He has had no fever, so far as he knows, no headache, nose bleed, or cough. He has not vomited.



Photograph of patient in case X, showing oedema about eyes.

His chief complaints are: Pain in the abdomen, swelling about the eyes, prostration, and diarrhoea.

Physical examination.—A large well nourished man, who is prostrated and looks sick. The tongue is moist and lightly coated with white fur. The eyelids are puffy, especially the upper (see illustration), conjunctivæ are slightly injected and oedematous. The masseteric region is prominent and slightly tender. All the superficial glands are palpable. Lungs, heart, liver, and spleen are normal. There is slight epigastric tenderness. The knee jerks are diminished. Over abdomen, chest, and back are many small erythematous spots resembling enteric spots. On admission the temperature is 102.5°, pulse 96, respiration 24.

September 25th. The temperature has fallen gradually since admission. Patient still complains of pain in the epigastrium and also in right side, latter made worse by breathing. The oedema of the eyes is less; the swelling over the masseters is less marked. Leucocytes 29,000, eosinophiles 9 per cent. The rash is fading. The spots are more irregular and rougher than typhoid spots. September 26th. Sections from muscle showed the presence of clumps of lymphocytes in the interstitial tissue and a few trichinæ. One of the mus-

cle sections was made to include one of the spots of the eruption. This proved to have no relation to the trichinæ, but to be due to a dilated capillary engorged with blood. September 27th. The temperature continues to fall slowly, the œdema of face is much less marked. The patient has no more pain. The rash is still present, but fading. The spleen is not palpable. September 29th. The temperature has been between normal and 101° each day. The œdema has disappeared, and only a few faded spots of eruption are present. October 4th. The temperature is subnormal. The rash is almost entirely gone, no œdema, no pain nor tenderness. October 7th. The patient goes home in a good condition. The urine was normal throughout. (See Table VI.)

TABLE VI.—THE BLOOD EXAMINATIONS OF PATIENT OF CASE X.

	Sept. 23.	Sept. 25.	Sept. 28.	Oct. 4.	Oct. 7.
Hæmoglobin	100%	.....	.....	.....	.....
Red blood cells.....	5,768,000	.....	.....	.....	3,480,000
Color index.....	1	.....	.....	.....	.....
White cells.....	29,800	20,300	25,500	10,800	11,300
Differential count....	300	200	300	300	300
Polynuclears.....	70.5	42.0	37.0	30.0	36
Large mononuclears..	3.5	2.0	1.0	3.5	4
Lymphocytes.....	15.5	12.0	5.5	10.0	7
Eosinophiles.....	0.0	30.0	55.0	54.0	52
Basophiles.....	0.0	0.0	0.0	0.0	0
Transitionals.....	1.5	14.0	1.5	2.5	1

Incubation.—In only the three earliest patients, all in one family, of our series could the date of infection be definitely placed. In two of these (the adults) there were gastrointestinal symptoms during the period of incubation; in one abdominal pain, nausea, and vomiting, in the other diarrhœa. The duration of the period of incubation in these cases was from ten days to two weeks. It is well known that this is the period required for the immature parasites lodged in the infected meat to reach maturity, reproduce their embryos, and for these embryos then to leave the intestinal tract and reach the muscles and organs of the host.

It is notable that excepting these three cases and Case VII, the histories are entirely negative or altogether misleading. Few people know of any possible danger in eating pork, either raw or cooked, the infected meat presents no offensive properties to call attention to it, and infection is accomplished without suspicion on the part of the victim.

In giving their histories, therefore, no mention is made of their having eaten pork, ham, or sausage, and only when suspicion is aroused are they questioned closely on that subject. The history up to the time of the onset of the symptoms for which they seek relief is, therefore, usually very imperfect. In Case VI the patient attributed her illness to a picnic which she had attended six days before admission, but the evolution of her symptoms makes it plain that the infection with trichinæ must have preceded the picnic. Six patients presented no symptoms whatever during the period of incubation. In many of the reported cases the gastrointestinal symptoms immediately following the eating of the infected meat are violent.

The invasion of the disease is marked by a variety of symptoms, exhaustion with loss of appetite; puffiness of the face or eyelids; pain in some of the muscles; fever with vomiting and diarrhœa; headache, vomiting, malaise, and nervousness; malaise, redness of the eyes and photophobia; weakness and headache; abdominal pain and diarrhœa. In three of our cases œdema of

the eyelids was the earliest symptom. Soon after the onset the characteristic symptoms develop rapidly.

Fever.—Fever in some degree seems to be common to all these patients. The fever is regularly continued, but the height and course of the fever are subject to great variation. In a number of the mild cases the temperature did not exceed 101° to 102° , and became normal at the end of a week. In others the fever was high, 105° to 106° in one case, and the course protracted over several weeks. It is notable that the temperature range in the two fatal cases was not exceptionally high and was exceeded by some of those (Cases VI and VIII) which recovered. In the cases with high temperature range it has often been remarked that remissions of considerable extent occur, as in Case VIII of this series, when remissions of 3 or 4 degrees were frequent. In other cases (Case VI) the high temperature is practically continuous. In a broad sense the type of fever is not unlike that of typhoid with which, as will be later developed, these cases of trichinosis are most often confused.

In our cases it was noticeable that, so far as the patients were concerned, the fever had very little effect. The patients of Cases VII and X were unconscious that they had had fever before admission, although their temperatures at the time of admission were 103° and 102.5° , respectively, and often the patients would express themselves as feeling quite well while the temperature was still running from 101° to 102° . In certain other cases, notably in the first three, the fever was associated with very profuse sweating and exhaustion. The temperature charts presented herewith represent two of the more striking cases. (See page 489.)

œdema.—In all but one of our patients œdema was noted as present at the time of admission. In one of the nine patients in which it was present the œdema was general, in the remaining eight patients it was noted as present, especially about the eyes. This œdema of the eyelids (well shown in the photograph) is therefore one of the most characteristic features of the disease. It is rarely marked and may readily escape observation or its significance fail to be appreciated. It does not differ essentially from the puffiness of the eyelids regularly seen in Bright's disease. In some of the patients the œdema was not symmetrical, but was more marked on one side than the other.

Conjunctivæ.—In five of our patients the œdema of the face was associated with conjunctival congestion, and in at least one patient a discharge from the eyes like a catarrhal conjunctivitis.

The explanation of the œdema of the face or other parts is variously given. Some explain it by the blocking of lymphatics by the parasites, others by pressure upon the bloodvessels. The more reasonable view seems to the writer to be that the œdema is simply an attendant feature of the myositis, and is most noticeable about the eyelids where serous effusions most readily appear, either in the case of local injury, such as a blow, or sting, or in systemic disease such as Bright's.

As will be seen from the notes of the cases, the œdema persists for a time, disappearing gradually with the subsidence of the general symptoms of the disease, another fact which suggests that it is not dependent upon the direct mechanical action of the parasites. In some instances (Case III) the œdema is general.

The muscular symptoms are a very constant feature of the clinical picture. These symptoms are produced by the myositis excited by the presence of the parasites. There are pain and tenderness in the affected muscles, and sometimes swelling. The degrees of these several symptoms vary as greatly as do the other clinical phenomena. One of our patients did not complain of local symptoms, nor could any pain or tenderness be elicited on examination. In some patients these symptoms were so slight that they would surely have been overlooked, unless carefully sought for. The first three patients, on the other hand, had such exquisite muscular pain and tenderness as to suggest a very acute peripheral neuritis, while in patient of Case VI, the hyperæsthesia, taken in conjunction with other symptoms, led on the first day to the suggestion of meningitis. Swelling was but rarely noted, except in the form of the cutaneous œdema already spoken of. Doubtless there is a swelling of the affected muscles, but it cannot be distinguished clinically from that caused by the œdema. While in a rough way the muscular symptoms may be proportionate to the number of parasites present in the muscles, there is no close relation. In some of the cases in which the muscular symptoms were very slight or wanting there was no difficulty in demonstrating the presence of the parasites.

There are no muscles specially affected so far as our observations go. The complaints of pain and tenderness may be general, when these symptoms are likely to be most prominent in the extremities, or they may be limited to certain muscle groups, the masseters, the muscles of the back or of the epigastrium, the pectorals, etc. The general distribution of the parasites which underlies these symptoms would tend to support the view that the parasites are distributed by the lymph and blood streams to all parts of the body, rather than that they attain the muscles by direct emigration from the alimentary tract.

The muscular pains and consequent rigidity may give rise to some misleading signs. Thus in the extremities the patellar reflexes may be absent entirely (two cases), may be diminished (two cases) or may be normal (one). In the thorax the involvement of the respiratory muscles may give rise to some dyspnoea, as in Cases V and VI, or even to quite marked cyanosis (Case VI). Some writers speak of paralysis of ocular muscles caused in the same manner, but these we have not seen.

The severity of the muscular symptoms is fully explained by the number of parasites found in these tissues. In a single gramme of muscle Leuckhart has counted from 1,200 to 1,500. In the body of the young woman examined by Zenker, Fielder estimated that there were 94 millions of trichinæ.

Eruption.—Four of our patients presented an

eruption, regularly upon the abdomen, chest, and back, in one extending to the buttocks. At the time of the examination the eruption noted was described in Case II as consisting of papular and erythematous areas; in Case III as elevated, reddened, patches; in Case VIII as small, red spots, fairly typical enteric, and in Case X as small, erythematous spots resembling enteric. These two latter patients came into the hospital in the midst of the typhoid fever season, and were placed side by side with a number of cases of undoubted typhoid fever. It was at first thought that the eruption in the trichinosis cases could be distinguished from the true enteric spots by the greater elevation and more irregular form of the spots, but we became convinced later that the distinction was impossible on such grounds. The eruption differs in no essential way from that which we are wont to regard as typical of typhoid fever.

The individual spots in the trichinosis cases last several days, gradually fading out, and new spots appear in the neighborhood exactly as in typhoid fever. In one instance in removing a bit of muscle for examination care was taken to include a portion of skin containing one of the spots of the eruption. Careful examination showed that the spot was simply a capillary vessel greatly distended by blood. The eruptive spot appeared to have no direct relation to the presence of the parasite.

Our experience with the eruption seems to have been unusual. Osler mentions an eruption of one or two rose spots in only one of his five patients, the others had none. Blumer and Neumann report an eruption in three out of nine patients. The presence of the eruption in some of our patients was very misleading.

The spleen.—Definite enlargement of the spleen was present in only two of our ten patients. In one of these the area of dulness was increased, but the edge was not palpable; the edge could just be felt at the costal margin in the other. In a recent epidemic in a German city, Schleipp found a definite enlargement of the spleen in thirty-eight out of forty-six patients. The splenic enlargement disappears with improvement in the general symptoms of the disease.

The blood.—The early cases of our series were observed before the value of the blood examination in acute clinical conditions was recognized. Reports of the results of blood counts are therefore found only in the last six cases.

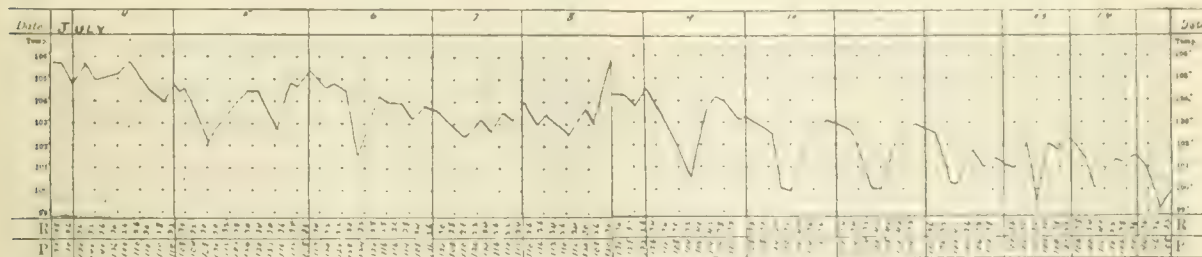
When in 1897 T. R. Brown, of Johns Hopkins, reported a case of trichinosis showing a leucocytosis and a remarkable eosinophilia, a new interest was given to the detection of cases of this disease, and to the study of the blood in it. Further observations of Brown's, since confirmed by repeated observations in various quarters, have established beyond doubt the fact that while the blood changes in trichinosis are not pathognomonic, they constitute most valuable aids in diagnosis, usually being the first signs in the sporadic cases to suggest the nature of the complaint.

Red cells and hæmoglobin.—The changes in these constituents of the blood are not constant. In Case VI there is shown a slight increase in the number of red cells with a fall in hæmoglobin

during the acute stage of the disease. In Case VIII, in which unfortunately no counts of the red cells were made, a rise in the proportion of hæmoglobin is recorded. In Case X, on the other hand, we find a fall in hæmoglobin with a strictly proportionate fall in the number of red cells during the acute stage of the disease. These results are sufficiently contradictory to make it clear that the interest of the blood examination does not lie in the direction of the behavior of the red cells.

The leucocytes.—Our observations agree with

leucocyte count is the enumeration of the several varieties of leucocytes. Brown's original observation of the presence of an unusual eosinophilia in these cases is confirmed by all of our counts. Although two of our cases, VI and X, show an eosinophilia at one time of 57.2 and 55 per cent., respectively, such counts have been exceeded in a number of recorded cases. At least one instance is reported in which the proportion of eosinophiles exceeded 80 per cent. (Brooks). Case VI corresponds to the first case observed



Temperature chart of Case VI, showing continued high fever.

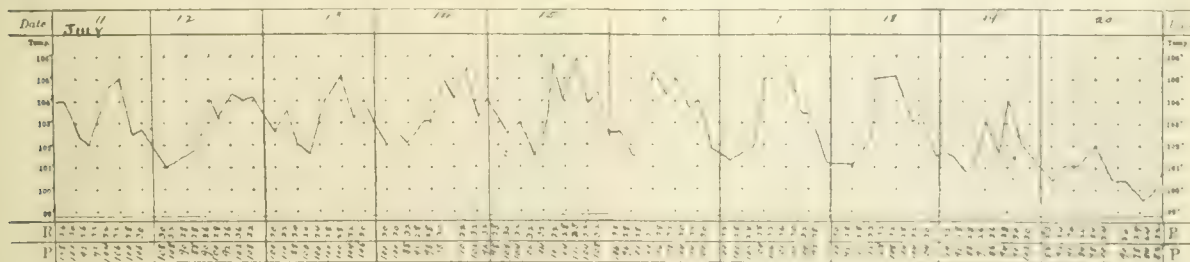
those recorded by many observers that an increase in the total number of leucocytes is generally present in this condition. In our cases the leucocytosis is not excessive, the highest totals being 29,800 in Case X, 28,000 in Cases V and IX.

The total leucocyte count is no guide to the severity of the infection or the duration of the disease. In his study of an epidemic in Hamburg Schleipp found that in sixteen mild cases, nine patients showed over 10,000 leucocytes, in twenty-nine moderate cases twenty-five patients showed over 10,000, and in eleven severe cases nine patients had between 10,000 and 20,000. In our series the highest count, 29,800, was registered in one of the mildest of the cases, while the severest case in which the leucocytes were counted, Case VI, the patient showed during the height of her disease no leucocytosis at all. In

by Brown in that the eosinophilia was not marked during the early and acute stage of the disease, but reached its height during the second month, when the patient was convalescent, and was maintained throughout her stay in the hospital, long after all other clinical manifestations of the disease had disappeared.

The counts in this case also illustrate the rapid variations which may occur in the eosinophilia. After three counts showing successively 14.8, 20.3, and 15.0 per cent. the proportion drops to but 5 per cent., and remains there for nearly two weeks, and then shows a rapid increase to 15.25 and still higher proportions. Vickery records a case which on November 17th showed 23 per cent. of eosinophiles, on the 19th but 7 per cent., and on the 23rd 37 per cent.

Schleipp regards the eosinophilia as propor-



Temperature chart of Case VIII, showing high fever with marked remissions.

Cases VIII and IX the leucocytes were very little above normal.

Cases VI and VIII show plainly that the leucocytosis may at times be absent in typical cases. Case VI shows a remarkable drop in the leucocytes from 20,300 to 6,300 three days later. Similar variations have been found by others. The leucocytosis when present usually continues through the height of the disease, the count falling gradually to normal as the symptoms abate and convalescence is established.

The differential count. Eosinophilia.—Of much greater interest and importance than the total

tionate to the severity of the disease and the number of trichinæ in the muscle, but so far as our experience goes it hardly supports that belief. Case X, a relatively mild one, shows practically as high an eosinophilia as the very severe one, Case VI, but in the former the duration of his stay in hospital was too brief to allow us to determine how long the high percentage was maintained.

In most of the cases a gradual fall of the eosinophiles is observed with the establishment of convalescence. In Case VI, however, as already noted, the eosinophilia persisted for some months after the discharge of the patient, but the counts

showing this fact were made in the dispensary after her discharge from the hospital and are not here recorded. In fifteen convalescent patients Schleipp found an eosinophilia varying from 6.2 per cent. to 45.2 per cent. This persistence of the blood change seems to indicate that it is not dependent upon the myositis, as has been claimed by some authors.

Of much greater interest than any other feature of the blood examination is its diagnostic value. The proportion of eosinophiles found in normal blood varies considerably according to various authorities. T. R. Brown gives a table showing extreme estimates varying from 0.67 to 11 per cent. (Zappert) of eosinophiles in normal blood. Usually the normal is taken to be from 2 to 5 per cent. Certainly in the counts in the Presbyterian Hospital it is very rarely that the eosinophiles exceed 2 to 3 per cent. High eosinophilia is common to a number of conditions of very diverse character, other than trichinosis, such as bronchial asthma, infection with any intestinal parasite, especially the ankylostomum, and a variety of skin diseases. T. R. Brown records 22.4 per cent. eosinophilia in bronchial asthma, 27.9 per cent. in the ankylostomiasis, 21.1 per cent. in anterior poliomyelitis, 24 per cent. in chronic eczema. Coe, in the *Presbyterian Hospital Reports for 1904*, records 51.8 per cent. eosinophilia in a case of pemphigus, 21.7 per cent. in psoriasis, and 20 per cent. in dermatitis herpetiformis. It is, therefore, clear that the high eosinophilia is not pathognomonic of any one complaint. None of the affections mentioned, however, in any way resemble clinically the cases of trichiniasis, so that in any doubtful case the presence of a marked eosinophilia is most suggestive. Once our suspicions are aroused it is easy to establish the diagnosis by the examination of a bit of muscle. This was done in all our cases.

This eosinophilia, it would appear, is not present in all cases. Attention has already been called to the low proportion of these cells observed for some time in Case VI. Schleipp records a case with a leucocytosis of 5,800 and but 3.2 to 5.9 per cent. of eosinophiles. Howard and Da Costa have recorded cases in which there was no eosinophilia, and Schleipp says that he saw three such cases. From the data before us it may readily be admitted that in very mild cases the characteristic change may be absent, but numerous reports from various sources have established beyond question the diagnostic value of the eosinophilia in most clinical cases.

Since the observations of Brown opened the subject, much energy has been spent in discussing the origin of the flood of eosinophiles present in these cases. An attractive inverse relationship in the course of the eosinophiles and polymorphonuclear cells has been pointed out, the proportion of the latter falling as that of the former increases, and vice versa. This appears to be true only in a limited way. Brown was of the opinion that the eosinophiles were developed from the polynuclear cells at the site of the local lesions produced in the muscles by the parasites. From this view Schleipp dissents. To the writer it seems that the whole question of the origin of

the several types of white cells and their puzzling variations is too little understood to render speculation profitable on these lines.

The fatal cases.—Both our fatal cases were in young men, aged thirty-two and twenty-four years, respectively. The first died of exhaustion, the second of the pulmonary complications of the disease. In both autopsy showed pulmonary infarctions, produced by embolism or thrombosis of the pulmonary artery. The pulmonary conditions are believed to be produced by emboli which are derived from thrombi developed in some part of the venous system and sent through the heart to the lungs. In Case IV the sputum became blood tinged. The expectoration of pure blood is said to be very characteristic of the pneumonia seen as a complication of trichinosis in epidemics.

The diagnosis.—From the clinical standpoint this is the centre of interest in the disease. In the presence of an epidemic hardly anything could be easier than a diagnosis of trichinosis. The family outbreaks are also usually easily recognized. The fever, muscle pains, oedema of the face, and other parts make a clinical picture which must be easily understood. In the sporadic cases, however, it may be very easy to overlook the nature of the complaint, especially in the mild form. Some of the cases have been mistaken for acute rheumatism, but it takes very little care to determine that the pains are in the muscles, not the joints, and that there is no swelling of the latter, nor any involvement of the heart, while the associated symptoms of trichinosis, especially the oedema, do not belong to rheumatism. High fever, delirium, apparent hyperaesthesia, and rigidity of muscles, especially of the neck in Case VI suggested cerebrospinal meningitis, mainly because the latter disease was not infrequent at the time. The associated symptoms in this case also quickly made the diagnosis plain. The disease with which there is real danger of confusion is typhoid fever. It will be noted in our reports that a number of our cases were first taken for enteric. It will be recalled that Zenker's original case was supposed to be typhoid, till the autopsy showed the absence of typhoid lesions and the presence of the parasites. Osler in his report of five cases from the Johns Hopkins Hospital deals with this question at length, and the difficulty of distinction is made further evident in the Report of a Case of Typhoid and Trichiniasis by McCrae. Case VIII of our series is a good example. The patient came in at the height of the typhoid season. His previous history was not any more suggestive than that of most cases of enteric. The patient looked prostrated and sick. His temperature, pulse, and respiration were in keeping with the idea of typhoid. He had a slightly enlarged spleen, and an eruption which could not be distinguished from the pink spots supposed to be characteristic of the latter disease. To be sure he had a slight puffiness about the eyes, but he had also the history of an injury, which might easily account for that condition. The first leucocyte count of 7,900 pointed in the same direction. It was not till at the end of a week a differential count showed 23 per cent. of eosinophiles that we were put on the right track, and exam-

ination of a bit of muscle clinched the diagnosis.

The next case (Case IX) was quite as suggestive of mild enteric, except that the eruption was lacking, till the chance observation of an eosinophilia led to further investigation of the blood and the examination of the muscle.

In the last case, on the other hand, although the case was a mild one, the diagnosis was made in the accident ward by a member of the house staff, and confirmed by later observations.

In brief, it is clear that a mild case of trichinosis may easily pass for one of typhoid. The Widal reaction so frequently fails in undoubted typhoid that its absence is not very suggestive. A high leucocytosis which is frequently present in trichinosis would excite suspicion, although many of our typhoid cases during the past summer have shown an initial leucocytosis of 15,000.

It is upon the differential count that we must chiefly rely in these mild cases, and the fact teaches the importance of differential counts as a matter of routine in hospital work. The differential count again may not be very impressive; we have shown that the eosinophilia may be as low as 5 per cent., or even fail altogether, but it is more reliable than any other of the clinical signs. Once our suspicion is excited further study of the blood regularly shows the characteristic eosinophilia. It is interesting to note that in several of our cases we evidently began our counts while the eosinophilia was developing, so that we could trace both its rise and fall.

The final test is, of course, the microscopical examination of a bit of muscle. This has been done in all of our patients and the diagnosis thereby put beyond question.

In the marked cases of the disease the fever, œdema of the face, and the muscle pains would at once suggest the nature of the trouble, even in the absence of a suggestive history. In this connection one must note that such an interval regularly elapses between the consumption of the infected meat and the development of the sickness that the patient does not associate the two, and may even have forgotten the fact that he had eaten pork in any form.

Again, as will be later emphasized, trichinosis may be acquired by those who have never eaten raw pork or ham. In Case V the patient denied ever having eaten raw ham or pork. In Case VII, the disease was acquired in the hospital itself from eating some pork chops which were not very thoroughly cooked.

Pathological lesion.—The following account (which has been kindly supplied by Dr. W. N. Berkeley, of the pathological staff) is based on the cases that have occurred in the hospital since 1898. It is quite confirmatory of other notices in recent literature, but the importance of a prompt diagnosis in suspected cases seems to justify a short description of our own experiences.

Technique.—In patients under suspicion of trichiniasis muscle tissue is naturally best removed from those muscles which are most painful, most swollen, and nearest to the stomach and bowels. We have had fair success with bits from the quadratus lumborum, better with material

from the pectoralis major. If possible a piece several millimetres in size should be got. It may be fixed quickly in 4 per cent. solution of formaldehyde, dehydrated in alcohol and embedded in celloidin, which with fibrous masses like muscle give better sections than paraffin. Freezing is ill adapted to cases of any difficulty; the tissues fall apart from lack of support, and the parasites are lost. Teasing of fresh specimens is quite practicable, though we have as a rule preferred to examine a series (15 to 25) of celloidin sections and have never failed so far to make out the parasite with reasonable ease.

Microscopical appearances.—The embryo worm is a familiar object requiring no special description here. The size varies much with the day of the disease. During the first two or three days of the patient's illness, we have gotten bits of muscle which showed a very minute parasite, without a distinct capsule, and apparently enclosed in the sarcolemma of a primary fibre. Later the typical ovoid sac develops, dissociating the muscle fibres in its region, and surrounded by a characteristic cellular exudate. This consists mostly of small round cells (lymphocytes?) with occasional neutrophil leucocytes mixed in. We have not observed eosinophiles except in and around hæmorrhagic areas made in removing the muscle. Interior to and in the small celled exudate are many large oval cells with large nuclei and small dark nucleoli. These appear to me to be swollen muscle cells from the wall of the sarcolemma. They have been called "fibroblasts." Exterior to the parasite will naturally be found more or less necrotic and distorted muscle tissue.

Through the muscle generally there is a peculiar interstitial myositis, the exudate consisting of scattered groups of small round cells lying in the endomysium and perimysium. This condition, so far as our experience goes here, is almost pathognomonic of trichiniasis. Presumably it is caused by diffusion of toxic materials from the body of the parasite.

A set of sections from the curious skin lesion in one of the cases (described by Dr. Bovaird) shows locally engorged subcutaneous capillaries and a serous exudate, but no cells.

Treatment.—This is purely symptomatic. In the interval which elapses between the consumption of the infected pork and the development of the characteristic symptoms the parasites have had time to mature in the intestines of the host and reproduce their young, and these embryo worms are already swarming through the patient's system. Nothing is to be gained by purgation, or the administration of intestinal antiseptics or vermifuges, as was formerly recommended. Rest and good nursing comprise the treatment in most cases. In the severer forms stimulation may be required to tide the patient over the height of the disease. As two out of our ten cases proved fatal, the disease is not always light, and we may find ourselves quite powerless against the severe exhaustion and the complications, especially pulmonary. The case mortality in Germany for eighteen years averaged 5 per cent.

Prophylaxis.—This is a subject which has thus far occupied our people only in a commercial way. It is well known that for many years Prussia and the other German States have maintained a rigorous microscopical inspection of all the hogs slaughtered within their confines. It is also well known that from time to time of recent years, efforts have been made to exclude from certain European countries all American pork products on the ground that they have been the means of spreading trichinosis. The questions at issue have been made the subject of careful investigation by the United States Department of Agriculture, the results of which have been published in Bulletin No. 30, entitled *Trichinosis in Germany*, the work of Charles Wardell Stiles, Ph. D. As the result of his studies Stiles concludes that the inspection maintained by Germany does not prevent the disease. In Prussia alone in the years 1881 to 1898, there were reported 3,822 cases of trichinosis. Of these 3,822 cases, 1,703, or 44.5 per cent., were due to meat which had been inspected and passed as free of trichinæ, while a total of 2,281 cases, or 59.6 per cent., was due to this or other faults of the German inspection. In the United States in about twice the length of time, Stiles estimates that approximately 900 cases have been reported.

The expense of maintaining the inspection in Germany is estimated to greatly exceed the total annual appropriation for the United States Department of Agriculture. There has, therefore, been no effort made to establish such inspection on this side for meats consumed in the United States. The opposition to the admission of uninspected American pork to various European countries was so strong, however, as to lead to the establishment of careful microscopical inspection of all pork or pork products intended for export. As a result of such inspection, some very interesting facts are brought out.

The following is quoted from the last report of the department, and covers the fiscal year 1903:

"Microscopical inspection of pork.—The number of carcasses examined was 489,667, classified as follows: Class A (free of all appearances of trichinæ), 477,195, or 97.45 per cent.; Class B (containing trichina like bodies or disintegrating trichinæ), 7,394, or 1.51 per cent.; Class C (containing living trichinæ), 5,078, or 1.04 per cent. There were 5,136 trichinous carcasses disposed of during the year; these weighed 1,093,376 pounds, and about 41 per cent. was tanked and the rest made into cooked meat."

If now we compare these figures with those for the Kingdom of Prussia for the years 1886 to 1896, we learn that in Prussia the average number of trichinous hogs found in each 10,000 inspected has been approximately three. It would appear, therefore, that there is vastly more trichinosis in our hogs than is found in Germany. Yet, as already stated, in eighteen years, Prussia reports 3,822 cases of trichinosis in man to 900 for the United States in twice the length of time. It is a matter of common experience that trichinosis in man is a relatively rare disease with us. The explanation of the apparent discrepancy is found in the fact that cooking regularly de-

stroys the trichinæ, and very few Americans eat uncooked pork, ham, or sausage, while the practice is common among the Germans.

Cooking, however, does not always protect. In the outbreak reported by Blumer and Neumann, the pork is said to have been cooked twice. If so, the cooking must have been very poorly done. In one of our cases, however, the disease developed in one of the hospital clerks, who had eaten pork chops cooked in the hospital, but said to have been not thoroughly done. Two other instances have come to the writer's knowledge where the disease was acquired by persons of culture and refinement, careful in matters of diet.

In view of the fact that we are yearly receiving such large numbers of German people who must for years at least follow their familiar customs, it is remarkable that epidemics of trichinosis are not more frequently reported here.

In this connection it is interesting to note that while six of our patients may be classed as Germans, two were Italians, one Irish, and one American.

The frequency of reports of the recognition of the disease since the discovery of the later means of diagnosis together with our own experience, for since this report was begun two new cases have been admitted to the hospital, making five cases in as many months, certainly suggest that the disease may be much more common than has been believed. The question naturally presents itself whether, if inspection does not prevent the disease altogether, and is too costly, our people are not entitled to the knowledge that no pork, ham, sausage, or other pork product should be eaten unless very thoroughly cooked? And are not the German people who come to us entitled to know that they are less protected here than in the Fatherland from the consequences of injudicious habits?

Stiles tells us "that the prejudice against eating trichinous pork which has been properly safeguarded (thorough cooking or thorough curing) is a pure sentimentality with no logical basis, for cooked or cured trichinæ are no worse than slaughtered hogs, broiled live lobsters, broiled oysters, or any other animal eaten in killed or semiliving (raw oysters) state; furthermore, the person who is prejudiced against eating properly safeguarded, slightly infected trichinous meat should, in order to be consistent, never touch any meat at all, for from 30 to 90 per cent. of all hogs, according to locality, and many sheep, cattle, and horses are infected with other muscle parasites (sarcosporidia) which are frequently even larger than trichinæ," we may accept these propositions and yet feel it proper to call attention to the fact that there is a vast difference between *not* thoroughly cooked trichinæ and the harmless oyster. Not one in a thousand people knows that there is such a parasite as the trichina, or that any danger lurks in one of our most common food products. Pork, sausage, etc., are regularly eaten thoroughly cooked from preference, not from any knowledge of the fact that long, severe illness and possibly death may lurk in such food unless thoroughly cooked.

Bibliography.

- Dalton, *Medical Record*, iv, p. 82, 1869.
 Hun, *Transactions of the New York State Medical Society*, 1869, p. 157.
 Krombein, *Buffalo Medical and Surgical Journal*, iii, June, 1864.
 Bardwell, *Medical and Surgical Reporter*, xv, July 14, 1866.
 Ristine, *Medical Record*, i, p. 249, 1866.
 Sutton, *Transactions of the Indiana State Medical Society*, 1875.
 Wendt, *American Journal of the Medical Sciences*, April, 1878, p. 434.
 Barton, *College and Clinical Record*, 1880, p. 173.
 DaCosta, *Medical News*, xxxix, p. 131, 1881; idem, *Medical Diagnosis*, 17th Edition, p. 957, 1893.
 Furey, *Physician and Surgeon*, iii, p. 112, 1881.
 Billings, *First Report of Massachusetts State Board of Health*, 1879.
 Ranney, *Detroit Lancet*, iv, p. 436, 1880-1.
 Persons, *Transactions of the Minnesota State Medical Society*, 1882, p. 251.
 Smith, *Report of the American Public Health Association*, vii, p. 145, 1883.
 Hailes, *Medical Annals*, iv-v, p. 245, 1883-4.
 Pope, *Medical News*, 1884, p. 307.
 Whitley, *St. Louis Medical and Surgical Journal*, xviii, p. 376, 1885.
 Groton, *Ninth Report of the State Board of Health of California*, 1886, p. 49.
 Taylor, *Ibid.*
 Kinney, *Pacific Medical and Surgical Journal*, xxx, p. 281, 1887.
 Wills, *Transactions of the Medical Society of New Jersey*, 1888, p. 188.
 Idem, Chicago Academy of Sciences, *Chicago Medical Examiner*, 1886, p. 304.
 Davis, *Nashville Journal of Medicine and Surgery*, 1884.
 Garcean, *Boston Medical and Surgical Journal*, cxxxi, p. 512, 1895.
 Haag, *American Medical Compendium*, 1895, 393-7.
 Noack, *Jour. of Comp. Med. and Vet. Arch.*, xvii, p. 108, 1896.
 Atkinson, *Philadelphia Medical Journal*, 1899, p. 1243.
 Blumer and Neumann, *American Journal of the Medical Sciences*, 1900.
 McCrea, Thomas, *ibidem*, July, 1902.
 Gwyn, *Zentralblatt für Bakteriologie*, 1899, p. 746.
 Howard, *Philadelphia Medical Journal*, 1899, p. 1243.
 Kerr, *idem*, August, 1900, p. 346.
 Strausky, F. v., *Prager medicinische Wochenschrift*, 1897, p. 597.
 Kinnicutt, *Medical Record*, 51, 1900.
 Brooks, *ibid.*
 Gordinier, *Medical Record*, Oct. 20, 1900.
 Osler, *American Journal of the Medical Sciences*, cxvii, 1890.
 Brown, T. R., *Jour. Exp. Med. Mag.*, 1898.
 Schleipp, *Deut. Archiv für klinische Medizin*, lxxx, 1-38, 1904.
 Stiles, *Bulletin No. 30, U. S. Department of Agriculture*.
 Pietrowicz, *Tr. Chicago Pathological Society*, v, p. 201, 1901-3.
 Gould, *American Medicine*, vi, p. 515, 1903.
 Thayer, *Philadelphia Medical Journal*, i, p. 654, 1898.
 126 WEST FIFTY-EIGHTH STREET.

PRACTICAL RESULTS ACCOMPLISHED
WITH RADIANT ENERGY.*

By SAMUEL STERN, M. D.,

NEW YORK,

RADIOTHERAPIST TO DR. LUSTGARTEN'S CLINIC, MOUNT
 SINAI HOSPITAL; CLINICAL ASSISTANT TO THE SKIN
 DEPARTMENT, POSTGRADUATE MEDICAL SCHOOL.

Under the term "radiant energy" we group a number of rays of different wave lengths, that are either emitted naturally by a number of substances, or are produced artificially by the aid of various apparatus manufactured for the purpose.

* Read at a meeting of the Harlem Medical Association, January 3, 1906.

The source of all natural radiant energy is the sun. The rays emitted are either directly utilized (sun light baths), or indirectly in the form of transformed radiant energy (radium, etc.).

The artificially produced radiant energy that we utilize in therapy includes the x rays, the spectrum rays, the high frequency spark, and the various forms of light baths. It is unnecessary for me to describe to you the difference in these various rays, and the methods of their production, as with these you are unquestionably familiar.

The object of this paper is to deal with the therapeutical results accomplished with some of these rays. I use the word some, because my experience with the use of sunlight and the different forms of light baths is rather limited.

In my opinion, the ray that has shown the most valuable therapeutical results, and the one that is used perhaps more than all the others combined is the x ray. When we speak of the x ray as a therapeutical agent, we do not merely refer to the x ray proper, which leaves the Crooke's tube as such, but to all the various forces emanating from the tube.

These are quite numerous. According to Freund they are made up of: 1, Heat; 2, ozone; 3, cathode rays; 4, ultraviolet rays; 5, rays of material particles from the anode; 6, Röntgen rays; 7, sparks and electric charges from the surface of the tube; 8, electric, or electrodynamic waves; and 9, rays of unknown character.

Personally I do not believe that the existence of ultraviolet rays in connection with the x rays can be taken into consideration, as, while there is no doubt they exist within the cavity of the tube, I fail to see how they can be of any value, as we all know that ultraviolet rays cannot penetrate ordinary glass.

The only rays that need to be taken into consideration are the x rays proper, the unknown rays and the electric discharges from the surface of the tube. There is still considerable dispute as to the method in which the x ray accomplishes its therapeutical effect. Some observers claim that it possesses very strong bacteriacidal properties, while others, and in my opinion they are correct, assert that the bacteriacidal effects in ordinary therapeutical doses are negligible. The preponderance of evidence seems to be that the only effect the x ray can produce on tissue is stimulating if used in small, and destructive if used in larger quantities. The action is probably entirely a destructive one, and the x ray is purely a destructive agent. It will tend to destroy tissue wherever it strikes it, and the degree of destruction is in direct ratio to the quantity of ray absorbed. The fact that diseased tissue has a much lower vitality, and that it will be destroyed before healthy tissue begins to be affected, is generally conceded to be at the root of all therapeutical benefit. The stimulating effect is unquestionable, but is simply a degree of destruction just as cold is a degree of heat.

The first histological effect of the ray is a stimulation of the vasoconstrictor nerves of the blood vessels, thereby interfering with the blood supply of the rayed tissue. If this stimulation is carried too far, it produces a gradual paralysis of these nerve filaments accompanied by vascular dilatation or hyperæmia.

If the ray has not been pushed beyond a certain

limit, this condition is only temporary, and we have what is called a first degree of x ray dermatitis. This is not very much to be dreaded, and is very often even desirable in curing malignant growths, etc. If the overstimulation has gone beyond this limit the paralysis of the nerve filaments is carried to a higher degree, and we have œdema, and other symptoms of inflammation, constituting the second degree of dermatitis. If the paralysis is complete, the vessels cannot regain their tone, and we get necrosis and gangrenous degeneration of tissue. This constitutes the third degree of dermatitis. These latter two degrees we must always try to avoid, as they are never of advantage, and are apt to be followed by more or less serious consequences.

The manner in which the rays emanating from radium accomplish their therapeutical effect is very similar to that of the x ray, while the action of the high frequency currents is based on a different principle. When applied in the form of a spark, at some little distance from the skin surface, it has a destructive cauterant effect, offering an easily regulable means of destroying smaller growths or diseased tissue of any variety. The action of the ultraviolet ray is very strongly bacteriacidal, but it possesses the disadvantage of very slight penetrability. Even under the most favorable circumstances, that is when the tissues are dehematized, it cannot penetrate more than 2 millimetres.

It is seen that there is a certain amount of similarity in the action of these various forms of radiant energy, and the choice of method to be applied to any affection depends largely upon the results which have been accomplished in this class. Very often we will find it necessary to combine two or more methods to obtain the best results. For instance, in some cases of epithelioma we may find that the x ray will benefit up to a certain point. Perhaps a few treatments with the high frequency spark will bring it to a successful termination. This question of choice of method is one which can only be solved properly by drawing upon personal experience; either our own, or that of others. We are gradually passing the experimental stage, and the methods are in a fair way to be numbered among those of classified science. I do not wish to imply that we have learned all its limitations for good or bad, and that there are no more surprises awaiting us, but I do want to say that to-day we can look back upon experience covering a number of years and know about how much result to expect in any given case.

To-day the x ray has lost most of the dread formerly attached to it, and we can begin the treatment of a patient with a feeling that if we take ordinary precautions we need not fear that we will aggravate the condition, even if we cannot cure him. In my hospital work, and in private practice, I have within the last two years given more than 10,000 x ray treatments without any serious results. I have repeatedly produced a first degree of dermatitis which was always of decided benefit to the patient. The number of patients that I have treated at Dr. Lustgarten's clinic at the Mt. Sinai Hospital, and in private practice during this period, are about five hundred.

Time does not permit me to go into any great detail, but I will divide the cases under different headings, and briefly report the result.

CANCER.—In the superficial variety of cancer (epithelioma) the treatment with radiant energy is very gratifying. The method of choice up to a short time ago was the x ray, but lately the high frequency spark has gained a great deal of prominence. Perhaps the combination of both is the best.

The most satisfactory method to follow is to treat all cases of epithelioma where there is a considerable destruction of tissue with the x ray, and those that have a raised, horny surface with the high frequency spark. The advantage of the high frequency spark is that we get much quicker results, and that it generally requires very few applications, and that there is no danger of burn comparable with that from x ray. The disadvantage is that it is connected with some pain, while the x ray is entirely painless. I have repeatedly cured cases of epithelioma that have resisted all forms of treatment in two or three applications with the high frequency spark. Especially where the epithelioma is not of a very long standing and not very extensive, it is far preferable to any other form of treatment.

The action of the spark is mainly a destructive one, and the application requires some skill to regulate the spark so that will not destroy too much nor too little tissue. The technique is easily acquired.

I have used radium in a number of cases, but I regret to say that I have not seen any results from it that could not be duplicated by other measures in a much shorter time. I have repeatedly persisted with its use in a case for a long time without any notable benefit, only to cure it by other methods. In one case radium was used for six months without any result by a colleague, who then referred the patient to us for treatment with the x ray. The patient is at present doing very well. In a case of epithelioma of the lower lip the patient had twelve exposures amounting to nine hours without much result. There may be a slight flattening of the tumor, but nothing very definite. In another epithelioma of the lower lip there was absolutely no result from radium, while the patient is apparently improving under treatment with the high frequency spark. I use a specimen of radium bromide in a mica container of 5 millegamme of 1,500,000 activity. That it is physiologically active I am thoroughly convinced. To determine this I exposed my arm to it for four hours, with a resulting ulceration that took six months to heal. There is a destruction of tissue that will be permanent.

Within the last two years I have treated forty-five cases of epithelioma by various forms of radiant energy. Out of these thirty were cured, the others were improved or are still under treatment, or have deserted before treatment was given a fair chance. There were only two instances in which I gave up all hope of satisfactory result, and referred the patient for surgical treatment.

One was an old lady with an epithelioma of the forehead. It was of the exuberant vegetating cauliflower type. I used Dr. Allen's arsenic orthoform paste, x ray, high frequency spark, and radium in rotation, without any effect. The growth would apparently yield to any form of treatment very readily, only to return promptly as soon as treatment was stopped. The other was an epithelioma of the upper eyelid which burrowed a channel into the orbit, with the lid swollen and cedematous, blocking the passage of the ray.

As the eye was also involved I suggested clearing out the orbit, which I believe is now being carried out.

The most wonderful result I have ever seen was in a patient with an epithelioma of the cheek. This patient presented himself for treatment on July 8, 1904, with an epithelioma of the left cheek of twelve years' duration. Almost half of the cheek was involved. There was a large raw bleeding cavity down to the maxillary bone. The periosteum could be distinctly seen. July 30th, the size of lesion was diminished to one half its original size. August 15th, less than a quarter, with a healthy looking base. At this time there was a ring of indurated tissue surrounding lesion which was destroyed with the high frequency spark. September 2nd, the lesion was almost entirely well. There was only a granulating raised surface, left about the size of a dime, which was again destroyed with the high frequency spark. Two weeks later it was entirely healed, but there was still some deep induration left in the scar tissue, which felt as if it were attached to the periosteum. Treatment was persisted in, until at present the scar tissue is freely movable, perfectly smooth and shows practically no remains of the disease. The patient had in all about eighty x ray exposures.

When we come to the deep seated, malignant growths, it is an entirely different story. I have never seen a deep seated cancer cured with x ray or any other form of radiation. I have seen improvement in most of the cases treated. There will generally be a temporary diminution of the size of the tumor, prolongation of life, and most important of all a disappearance of pain, with the natural consequence of a feeling of well being that may continue up to the last moment. I have treated ten cases of carcinoma of the breast, nine recurrent and one primary.

This last is a man fifty-eight years old with the following history:

The patient presented himself for treatment on July 13, 1904, with a hard, painful tumor about the size of a walnut, involving the left nipple and surrounding tissue, which was first noticed about two years before. The glands were enlarged in the left axilla. After twelve treatments the tumor almost entirely disappeared. The pain did not trouble him after the first few treatments. The patient then stopped treatment for some months, and returned with the tumor again distinctly noticeable. Since then the tumor has increased in size until at present it is of about the size of a small egg. He has no pain, feels quite comfortable, and treatment is being continued.

In the recurrent cases, three patients died, four are apparently well, but still have enlarged glands, and more or less induration at the seat of tumor, and the two others are still under treatment, one of them developing a metastasis in the other breast.

I treated one case of cancer of the larynx. The patient was referred to me by Dr. M—. The cancer was pretty far advanced when I first saw him. At that time, unfortunately, I did not have any unipolar tubes, which would be particularly adapted for these cases, so was compelled to treat him by various makeshifts. The physician who made frequent laryngological examinations assured me that the growth was diminishing after each exposure, but the patient got too weak to call at the office for his treatment, and shortly after died.

I am treating now a patient with a carcinoma of the vagina. She originally had a cancer of the cervix, and all the uterine organs were removed. Three months later there was a recurrence in the vagina,

which at present is completely involved. She is being treated with the unipolar tube which I devised,¹ and the results up to the present are extremely satisfactory. The discharge, which was of a very offensive, bloody, purulent nature, has entirely stopped. The pain, which was very bad, has entirely disappeared, and she has gained twenty-five pounds during the two months that she is under treatment.

I have treated perhaps a dozen patients with malignant growths of various abdominal and pelvic organs who all improved more or less for a time, but I am sorry to say I have no cures to report.

INTERNAL DISEASES.—In five cases of splenic leucæmia treated with the x ray there was very marked improvement in every case. As a rule, the pain was the first to disappear, there was a diminution of the size of the spleen, and the condition of the blood improved.

I have treated six cases of Hodgkin's disease with good results. The glandular enlargements diminished and when treatment was sufficiently persisted in they entirely disappeared.

In thirty-five cases of chronic rheumatism, lumbago, sciatica and other nerve affections treated with x ray, high frequency, or the combination of both, twenty were cured, ten improved and five showed absolutely no result.

In rheumatism high frequency is of most value in the chronic cases, of less value in the subacute, and of very little value in acute affections. I have seen a case of sciatica that was treated most vigorously and persistently show absolutely no improvement, where the next case, one of equal severity, was very much improved in three treatments. I have found that in nerve affections it is impossible to tell what the result of treatment will be in any given case.

In five cases of tubercular arthritis of the knee joint, treated with x ray, where there was accompanying pain, the latter generally disappeared. In two cases there was a distinct diminution in the size of the knee joint. In one patient with a tubercular epididymitis whom I treated with x ray in Dr. Allen's practice during his absence last summer, there was a very marked diminution in the size of the epididymis and the last report that I have from Dr. Allen is that it is practically normal. In eight cases of cervical tuberculous adenitis there was a marked improvement by x ray treatment in each patient. In those cases where there was any scarring, as the result of the suppuration and breaking open of these glands, the appearance of the scar was always improved. In one case of a net work of tubercular sinuses of years duration, involving the left side of the neck and chest, as far as the axilla and down to the left nipple, there was a marked improvement.

SKIN DISEASES.—Most of my work was done in this field, and the results in general are so gratifying that much of the therapy of skin diseases has been revolutionized. There are a number of conditions where we can look forward to a cure in practically every case; such, for instance, is sycosis, *of the parasitic or non parasitic type*, of which I have treated with x ray sixty cases with a cure in every instance where they persisted with treatment for a reasonable length of time. By this I mean from four to six weeks.

I have repeatedly seen cases of five years' duration involving the hair follicles of the entire face, cured in six weeks' treatment. I have only seen recurrence in two cases, in both of which the upper lip was involved, and the source of reinfection was from the nostrils.

I have treated sixty-five cases of eczema of all varieties, involving every part of the body. The proportion of cure is almost as great as that in syphilis. As a rule, it is a question of persistency, when the worst cases can be cured. The result is very good in acne vulgaris, either of the pustular or the indurated variety. Of this I have treated forty cases with a great deal of satisfaction. It is not quite so satisfactory in acne rosacea, of which I have treated five cases with no startling results. I have treated twenty-five cases of lupus erythematosus with the high frequency spark, with better results than I could expect from any other method. In three cases of lupus vulgaris there was a very decided improvement with the spark treatment, also in two cases of tuberculosis vera cutis of the dorsal surface of the hand.

The method of application in these cases was a very short spark (about two millimetres) of sufficient intensity to destroy tissue to the depth desired.

In lichen chronicus, lichen planus, and lichenoid eczema conditions, the result is good. I have treated twenty-five cases. The subjective symptoms generally yielded very readily.

Out of twenty cases of psoriasis involving all parts of the body, every patient was cured with whom treatment was sufficiently persisted in.

In alopecia generalis, if the alopecia is due to an insufficiency of the blood supply to the scalp, a great deal can be accomplished with the high frequency labile applications, using them strong enough to bring about a fair degree of hyperæmia of the scalp. In alopecia areata, the result is about the same as that accomplished by other methods. That is, you can get a new growth of hair, but in about the same length of time as you could get it by painting it with carbolic acid or other irritants. The advantage lies in the method being less painful and inconvenient. I have treated fifteen cases of alopecia.

The high frequency spark is of a very important value in the destruction of verrucae of various types. I have used it in twenty-one cases, in some of which there were as many as fifteen warts. The soft variety can generally be destroyed in one sitting. The hard, callous variety requires several sittings, and it is often of advantage to cut off the horny layer as far as possible, before applying the spark. This destructive effect of the spark I utilized in five cases of molluscum contagiosum, bringing about a very rapid cure in each case.

It is also of very great value in the destruction of various forms of nævi and birthmarks. I treated sixteen cases of nævus capillaris, all with good results. In five cases of nævus pilosus, I removed the hairs with electrolysis, and then destroyed the nævus with the spark. The result was very satisfactory.

Eight cases of keloid, three of which were idiopathic, and five involving scar tissue, were all cured. The idiopathic variety is the more difficult, and yields slower to treatment.

In one case of folliculitis decalvans, there was a decided improvement. This condition persisted for

a great many years. It was in the form of a net work of thickened hypertrophied tissue, burrowed with sinuses, filled with pus, involved the entire occiput, and resisted every other form of treatment.

I have treated three cases of favus, all with good results. They were of years' standing, and involved an extensive portion of the scalp. The rays were persisted in until there was an epilation of the affected hairs, when various germicidal ointments were used. The hairs returned in about three months, with only one little spot of recurrence of the lesion. Recently we have been treating trichophytosis of the head and other parts of the body in the same manner. Eight patients treated were all cured.

The power of the x ray to epilate hair can be utilized in hypertrichosis. The treatment must be persisted in for a long time. The usual routine is to give about five to eight minutes exposures three times a week, until the hairs have fallen out. This generally takes from ten to fourteen treatments. When this has been accomplished, if there is a little dermatitis we discontinue till it disappears; if not, we give exposures once a week for about a year. At the end of a year, as a rule, there is not much fear of the hairs returning. I treated nine cases this way with good results.

The x ray and the high frequency currents both have the power of allaying pruritus due to various conditions, such as pruritus senilis, pruritus due to cardiac, hepatic or gallbladder affections, pruritus vulvae, scroti or ani, without any visible cause, etc. I treated fifteen of these cases, with more or less improvement in every case.

I treated four cases of mycosis fungoides with very remarkable results. Even those cases of long duration, with distinct fungoidal masses scattered over the body improved. Every case has been benefited up to the point of practical cure, but will generally relapse sooner or later after treatment has been discontinued. You can keep them well indefinitely by keeping up treatment.

In two cases of sarcomatosis cutis pigmentosus (Kaposi) and in one case of sarcoma hæmorrhagica, the amount of pigment diminished, the pain disappeared and the general condition of the patient improved under treatment with the x ray.

In a patient with a xanthoma diabeticorum, who had thickened, cord like ridges over both hands, arms and legs, there was a very marked flattening, and even complete disappearance of the ridges on the parts treated.

Résumé.

In summing up the results accomplished with "radiant energy" we find that the x ray and high frequency spark are of extreme value in the cure of all forms of epithelioma.

They are of great value in the treatment of other malignant growths, in their ability to stop pain and prolong life, but should only be used in nonoperative cases, or in conjunction with surgical measures.

In internal diseases they are of value in leucæmia, Hodgkin's disease, various forms of chronic tubercular conditions, in subacute or chronic rheumatism, lumbago, sciatica or other forms of nerve affections.

In skin diseases, the x ray will show practically one hundred per cent. cures in syphilis of the parasitic or nonparasitic type. Almost as great percentage in eczema of all varieties, and in psoriasis,

but in the latter there is the usual chance of recurrence. In *acne vulgaris*, in conjunction with other treatment, it is of great value, but of not very much value in *acne rosacea*. It is very valuable in *favus*, *trichophytosis*, *keloid*, various forms of *lichen*, *mycosis fungoides*, *folliculitis decalvans*, and *hypertrichosis*.

The x ray, or the high frequency spark, or the combination of both, is very valuable in the treatment of all forms of prurigenous affections due to any cause.

The high frequency spark accomplishes a great deal in the treatment of *lupus erythematosus*, *lupus vulgaris*, *tuberculosis vera cutis*, in the destruction of all forms of *nævi*, *verrucae*, *molluscum contagiosum*, and other forms of superficial growths.

It is of decided benefit in *alopecia* due to anæmic condition of the scalp, and in *alopecia areata*.

141 EAST SEVENTY-FOURTH STREET.

THE SURGICAL TREATMENT OF PROSTATIC ENLARGEMENT.*

By NATHAN JACOBSON, M. D.,

SYRACUSE, N. Y.,

PROFESSOR OF CLINICAL SURGERY, COLLEGE OF MEDICINE,
SYRACUSE UNIVERSITY; SURGEON TO ST.

JOSEPH'S HOSPITAL.

In the limited time permitted me for the discussion of this important subject, it is not my purpose to make more than a few general observations.

The surgical treatment of prostatic enlargement is a subject which has recently received the earnest study of our ablest surgeons and genitourinary specialists.

While there may be some difference of opinion as to the choice of operative procedure, all surgeons are to-day agreed that the condition which has in the past been termed prostatic hypertrophy and which has been regarded as a necessary accompaniment of old age for which little could be done, is amenable to surgical treatment, with the prospect of affording great relief and of granting years of comfort to those so afflicted.

There is a time when the enlargement is simply of congestive character. During this period I have repeatedly seen most pronounced benefit from massage of the gland and the administration of such drugs as will render the urine bland and the mucous membrane free from irritability. Upon the medical attendant devolves the task of appreciating the time when the bladder begins to give evidence of failure of function, when it no longer possesses the contractile power to completely expel its contents and when the presence of residual urine becomes constant. When this occurs, it is the duty of the medical attendant to warn the patient that unless the existing condition be radically relieved, serious dangers threaten him. If nothing is done and cystitis with decomposition of urine and bladder irritability supervene it should be made clear to the patient that the situation is a serious one, but that even then it can probably be relieved. It certainly is unfair to the patient as well as to prostatic surgery to permit the pathological process to advance

* Read at the annual meeting of the Medical Association of Central New York, held at Buffalo, October 24, 1905.

until his kidneys become impaired, until broken down in health by suffering and inflammatory changes in the urinary apparatus, the general tone of the patient is so depressed that he can no longer be benefited by a surgical operation. If any point has been settled it is that these cases demand early surgical attention. The advanced age of the patient is by no means a contraindication to operation. The all important consideration is the condition of the kidneys. If operation be delayed until these organs are badly damaged, the prognosis, no matter what therapeutical or operative procedure be undertaken, is most unfavorable.

While the surgical profession is not fully in accord as to the relative merits of and indications for the various operations proposed, we are gradually getting on to common ground.

Personally I have had no experience with the Bottini operation. I am, therefore, unable to speak of it except from the experiences recorded by those who have resorted to it. While some patients are benefited and a limited number cured by the galvanocautery, I am convinced that in every instance where a cure has been so effected the same result could have been secured and with greater certainty by prostatectomy. I also believe that where prostatectomy has failed the Bottini method would not have done more. I assume that the various other surgical procedures such as castration, section of the vas deferens and ligation of the iliac, are no longer regarded as measures upon which one can depend for the cure of this condition, and that in discussion of the treatment of prostatic hypertrophy the choice lies between some form of prostatectomy and the Bottini operation.

My preference is for perineal prostatectomy. This operation appeals to me because of its anatomical advantages and the accessibility of the gland through this route. The operation is not usually attended with much difficulty and can as a rule be completed in fifteen minutes. The patient is placed in the ordinary lithotomy position. Complete anæsthesia is of great advantage, as it permits thorough relaxation of the patient. Goodfellow was the first to call attention to the fact that extreme flexion of the thighs upon the abdomen greatly shortens the distance of the perinæum to the prostate. The gland is indeed rendered easily accessible to a finger of ordinary length; so much so that no other accessory is really necessary to bring it entirely within operable range.

If one is to be guided in the removal of the gland by the sense of touch alone, a median incision is all sufficient. If, however, the operator prefers to see each step of the operation as he proceeds or if he is to use some form of tractor, a transverse incision either semilunar or of an inverted V in form is preferable. As to the two latter there is no choice for they assume practically the same shape as soon as the skin and subcutaneous tissue is severed. After the superficial incision has been made, the urethra is opened upon a staff, the opening being made into the membranous portion close to the tip of the prostate. The index finger is now carried into the bladder dilating the prostatic urethra in its course. From this stage I sometimes pursue the method of Dr. Goodfellow, using my finger nail to tear open the capsule of the gland, and shell out

the prostate entire carrying with it the prostatic urethra; or I insert the tractor of Dr. Young, incise the capsule over either lobe and dissect each lateral lobe out separately and preserve the prostatic urethra.

There is a marked difference in the ease with which this separation is effected. Ordinarily the adhesions are not firm and the gland is freed in a few minutes, coming away en masse, or each of the lateral lobes may be turned out separately. On the other hand I have encountered an occasional case in which the gland seems almost to have been fixed in its position by cement and then it has been necessary to remove it by morcellation.

A great deal has been written and said about preserving the urethra. From my observation in the treatment of cases of ruptured urethra I believe that it is a matter of no consequence as to whether it be preserved or not. In treating ruptured urethrae, the essential thing is to establish vesical drainage. With time Nature always restores the urethral canal. With an experience which covers a great many cases, I have never attempted the approximation of the torn parts of the urethra and indeed the condition of the urethra has been practically ignored. And so in removing the prostate it has never seemed to me that preservation of the urethra was at all essential, nor have I indeed seen any difference in the subsequent course of the cases whether the urethra has been damaged or not.

In one case I tore the rectum in my manipulations. No effort was made to sew it up; the rent healed promptly of itself. This accident occurred to me but once. There is occasionally some difficulty in delivering the gland after it is entirely freed. As a rule, however, this is readily accomplished with the aid of lithotomy forceps. Drainage is useful for a few days, being required for a longer period where there is a septic condition of the bladder. Otherwise it is necessary only until bleeding ceases, which is usually two or three days. Continuous irrigation as suggested by Young is very serviceable. The patients are gotten out of bed as speedily as possible.

The shock attending perineal prostatectomy is very slight. In fact it is surprisingly so, being no greater than that attending an ordinary perineal section. The ligation of a vessel is rarely required; the bleeding being usually of venous or capillary origin.

There are a great many advocates of suprapubic prostatectomy, both in this country and England. One of the particular indications for this procedure is said by them to be the coincident presence of stone in the bladder. I confess to a preference for suprapubic lithotomy as against any other method for removing stone from the bladder when there is no other consideration but the removal of the stone. But as one of the two deaths I have to record after prostatectomy followed the removal of the calculus and the prostate by this route I feel that I have reason to question the soundness of this doctrine. I am just now inclined to urge the perineal route as being the preferable one when it is necessary to remove the prostate as well as stone. I say this because the removal of the gland alters the local conditions completely. When this has been done

we are able to dilate the bladder neck almost ad libitum, and a stone of exceedingly large calibre can be readily extracted. As illustrating this permit me to present to you a prostate gland removed from a man in his eightieth year who had led a catheter life for a year, during which period he had been compelled to catheterize himself at least once an hour and frequently every half hour. The bladder contained two stones, taken away so readily that had they been of twice the size of the larger one, which has a long diameter of one and one half inches and a short one of one and one eighth inches, the removal would have been as easily effected. There surely is less shock probably because there is less hæmorrhage after perineal than after suprapubic prostatectomy.

I desire to call attention to a condition which is present to a greater or less degree in all of the men requiring surgical attention for enlarged prostate. I refer to the presence of arteriofibrosis or sclerosis. They all have tense and many of them pipestem arteries. When I first began to operate on those cases I frequently hesitated because of the state of their arteries. Careful study of this feature has taught me that not only is it no contraindication, but that after operation the arterial tension is greatly lessened. I have followed my cases carefully, and am satisfied that in some way an enlarged prostate gland is a factor in heightening arterial tension. Whether this results from some subtle physiological connection or is simply produced by the severe straining to empty the bladder or the nervous agitation attending it, I do not know. But this much is certain, that after the removal of the gland the pulse becomes much softer and the arterial tension is greatly lowered. Since noting this fact I have asked my associates on the surgical staff of St. Joseph's Hospital to make observations in this regard and they have been able to corroborate my findings.

As stated at the outset, the purpose of this paper is to deal but cursorily with a few of the salient features of the surgery of prostatic enlargement.

In conclusion I cannot express too strongly my conviction, based upon my own as well as the experience of others, that the time has arrived when we can say to the large number of men suffering from this ailment that, with the renal function not impaired, prostatectomy is a reasonably safe operation, not attended with great risk, and will afford them relief, not slight and transient, but great and lasting.

430 SOUTH SALINA STREET.

The Education of the Respiratory Function.—

Faure and Reymond advocate this method in anæmia, convalescence from disease, unhealthful occupations, neurasthenia, imperfect nutrition, and for persistent bronchitis, emphysema, threatening tuberculosis, thoracic insufficiency due to deformity, the bad results of adenoids, pleurodynia, etc. The method which they employ consists of exercise for the muscles which fix and control the motion of the vertebral column, head, and shoulder, for those which raise the sides, for the lumbar and abdominal muscles, and for the diaphragm. After a few weeks or months of practice the movements become automatic and the type of the respiration is changed. In a series of one hundred and seven cases the increase in the chest measurement was remarkable.—*Revue de médecine.*

THE DETERMINATION OF THE GASTRIC AREA, WITH SPECIAL REFERENCE TO TRANSPOSITION OF VISCERA, HOURGLASS STOMACH, GASTROPTOSIS, ETC.

By A. L. BENEDICT, A. M., M. D.,

BUFFALO,

CONSULTANT IN DIGESTIVE DISEASES, CITY AND RIVERSIDE HOSPITALS.

The gastric area is determined to a large degree by ordinary percussion, occasionally by palpation, as when the wall is thickened or when the abdominal wall is soft and thin or when the true abdominal wall is displaced by a large umbilical hernia or by diastasis of the recti. Succussion, which is really a form of palpation, is also employed, especially when the stomach is dilated and partly filled with liquid and gas. In succussion, we palpate not so much the stomach as its contents, and succussion is really a form of ballottement, familiar in the diagnosis of pregnancy, of echinococcus cyst with loose daughter cysts, and of certain forms of cholecystitis. Succussion is, however, liable to give confusing results, as we may fail to discriminate between stomach and colon, and may infer too little or too great degrees of dilatation.

Inspection of the stomach, or rather of the area of gastric peristalsis, is feasible if the abdominal wall is extremely thin and, in an indirect way, under normal conditions. Dr. Mark I. Knapp has called attention to the feasibility of determining the lower level of the gastric peristalsis by sighting very obliquely over the abdomen, while the patient breathes. I have frequently verified the truth of this statement by other means. Auscultation, especially of deglutition murmurs, may also furnish very helpful hints as to the location of the stomach. Since 1893 I have relied mainly upon auscultatory percussion for the determination of the gastric area and have verified the accuracy of the method by x rays, outlining prior to operation and necropsy, and other methods. In some few cases, the heart beat against the distended stomach furnishes the percussion, so that we need only move the stethoscope to determine the gastric area. Generally speaking, however, it is better to hold the stethoscope still and to move the percussing finger. I find the ordinary binaural Cammann stethoscope, or rather my simple flexible modification of it, superior to the monaural instrument, and the various forms of the phonendoscope have proved disappointing. In certain cases, as when the colon and stomach are distended and in close contact, it is impossible to discriminate between colon and stomach by ordinary percussion or even by auscultatory percussion. In such cases I use a tuning fork instead of the percussing finger. In my office I often substitute for the percussing finger an electric buzzer with hard rubber stem to communicate a thrill to the stomach or other organ examined. For nice discriminations, however, this is not so good as the slightly more troublesome tuning fork.

In 1897 I attempted to make a radiogram of iron tablets in the stomach, but failed. In July of the same year, through the courtesy of Mr. I. W. Detwiller, an x ray apparatus was placed at my service

and a fairly large series of examinations were made with the fluoroscope. Bismuth and capsules containing reduced iron were used to throw a shadow. The results were very satisfactory, but, as in every case, the results of the much simpler method of auscultatory percussion, were verified, I employ the x rays only in puzzling cases. This examination with the fluoroscope showed why the radiographic method had failed—gastric peristalsis moves the capsule too rapidly to permit a sufficiently long exposure. When bismuth is used free in the stomach, it is at first seen as a dark mass at the bottom, later it becomes distributed over the stomach so as to throw a faint shadow of practically the entire area. In some cases with active peristalsis, the fumbling of the bismuth by the peristaltic wave is beautifully shown. This method was reported in *Medicine*, February, 1898, and Dorn made an independent report in the same month, in a German periodical. My claim of priority has been admitted, in this country, at least.

What may be called combined methods of determining the gastric area depend upon the insertion of some mass into the stomach. In a sense, therefore, succussion of gastric contents and the x ray method just discussed, are combined methods. Among the simpler combined methods may be mentioned distention of the stomach by effervescence, to facilitate percussion, and the auscultation of the sounds produced at the cardia during swallowing. These sounds are conducted with especial loudness only over the gastric area but can, obviously, be continued for but a short time, so that it is hardly practicable to use them for complete mapping out of the area. They are of especial service to determine whether an area of visceral transsonance is really the stomach or something else, as the colon.

External investigation of the gastric area during instrumentation, for the purpose of determining the gastric area, depends upon inspection, auscultation and palpation.

Inspection is applied when the gastrodiaephane is used. This method is not very reliable and is somewhat troublesome, as compared with its small practical utility. The deglutible diaphane, of which Dr. H. W. Lincoln's instrument is an excellent example, always gives me the same sense of embarrassment as is encountered by a driver whose horse begins to back at a critical moment and who experiences the impossible desire to push on the reins.

Dr. Fenton Benedict Turck used the x rays to determine the position of an opaque instrument in the stomach, before my bismuth method was employed. Indeed, the only points of superiority of the latter are its freedom from objection on the part of the patient and the possibility of seeing the shadow of the whole gastric area at once. Yet, in doubtful cases, the shadow of a bone bulb or of the Turck gyromele is much more distinct.

Fluorescin solutions have been used to intensify the illumination of the diaphane but, in my experience, they have not perceptibly done so. Neither do they afford practical results with the x rays. It has occurred to me to use fluorescent solutions of other kinds to obtain luminous instead of an opaque shadow with the x rays, but quinine and so forth have not proved practicable, the cyanide combinations are toxic, and I have not tried tungstate and

analogous preparations, which are not highly toxic. In general it is obvious that an x ray dark shadow will afford a much more definite area than a luminous shadow, however produced; still, the possibilities of the latter are sufficient to warrant a comprehensive attempt at discovery of a practicable means of illuminating the stomach.

Auscultation may be applied to any sound produced within the stomach by any means, such as an endogastric rattle or bell, electric buzzer, etc. In spraying the stomach we may also practise auscultation, and in my method of spraying from the outside end of the tube, a beautiful metallic tinkling may be obtained if the stomach is partly full of water. A whistle may be inserted into the gastric end of the tube, but is scarcely necessary.

Palpation of inserted instruments may be applied to various fairly stiff sounds, with bulbs, but is most practical when Turck's gyromele is used. In the latter case, we palpate the vibrating tissues rather than the instrument.

Internal methods alone may assist in determining the size and position of the stomach, but do not enable a definite area to be mapped out. The distance at which the tube works best affords some vague conception of the altitude of the stomach, and the amount of contents withdrawn may enable the diagnosis of dilatation to be made. However, even in extreme dilatation, the amount of contents does not usually exceed the maximum capacity of the normal stomach, 2,000 to 2,500 c. c., and we must be careful that intestinal contents are not included. Conversely, a small quantity of contents does not exclude dilatation. The old method of determining the capacity of the stomach by introducing water up to its full capacity is dangerous and unscientific. Several years ago I showed that during ordinary lavage the stomach gets rid of 1,000 to 2,000 c. c. of water introduced, probably by passage through the pylorus, even without pyloric insufficiency. This loss may theoretically be ascribed to absorption from the stomach, but all authorities are extremely sceptic as to the possibility of any appreciable degree of gastric absorption.

The altitude of the cardia may be determined approximately, sometimes by merely noting an obstacle to the passage of the tube, fairly well by the use of the sound with bulbous end, very accurately by McCaskey's inflatable bulb, provided we use only gentle traction, or with one of Turck's modified gyromeles.

The practical application of these methods may be illustrated in a less systematic way by the discussion of illustrative cases.

CASE I.—TRANSPPOSITION OF VISCERA: Patient (No. 1070 of 1897-'8) presented a resonant area in the ordinary position of the stomach, reaching from just above the costal margin nearly to the umbilical equator, as determined by auscultatory percussion. In the corresponding right area there was found a somewhat smaller and higher transsonant unit. Pulmonary resonance was found lower than usual on the right side and ceased at the sixth left rib. With the stethoscope at various places in the right hypochondriac region, the diaphragmatic line could be made out. No definite area corresponding to the liver could be found on this side. On the left, however, with the stethoscope in the region of flatness, an area was mapped out from the fourth rib

to the costal arch, such as is ordinarily found on the right side, except that it was more pointed than usual below; that is to say, instead of crossing the epigastrium horizontally, it followed the angle of the ribs, and their cartilages.

Palpation met with resistance under the left costal arch but not under the right. Auscultation discovered a rather feeble first heart sound in the usual left area but the apex beat could not be felt here. At the corresponding right point, however, the first heart sound was strong and the apex beat palpable. A reversed cardiac area was also demonstrable by auscultatory percussion.

Transposition of the liver and heart was, thus, definitely determined. The splenic area was so small that, in the absence of a palpable mass, its position could not be determined except by inference. However, as the resonant area on the left side was larger than on the right, and really appeared more like a depressed stomach area than that of the left corresponding region, it was perfectly conceivable that the stomach was not transposed but simply depressed by the liver. The appendix could not be determined by palpation and, though the right testicle hung lower than the left, general transposition could not safely be inferred.

The deglutition sounds, however, enabled it to be positively stated that the small area on the right side was the stomach. They were plain over this area, were heard only very faintly over the epigastrium and not at all in the dubious left area. Thus, the latter must have been distended colon.

CASE II.—HOURGLASS STOMACH: (Simulated by pyloric obstruction and duodenal dilatation.) Patient (No. 21 of 1904-'5) was seen in consultation with Dr. W. W. Jones, of Dayton. The history was that of chronic gastric ulcer with dilatation and pyloric obstruction. The first suspicion of hourglass stomach was derived from the examination by auscultatory percussion, which gave a large gastric area with an incurved greater curvature. Careful, but not leading, questioning elicited the history of frequent vomiting of some drink at the end of a meal, or shortly afterward, without the vomiting of the meal itself. The diagnosis of hourglass stomach immediately suggested itself but, as I told Dr. Jones, the rarity of the condition rendered one slow to make such a diagnosis, and the vomiting could be explained by a dilated œsophagus, or an œsophageal diverticulum. Moreover, such differential vomiting sometimes occurs without any explanation, perhaps on account of a sort of filtering function of the cardia, such as quite regularly occurs at the pylorus. Then, too, an hourglass stomach from the standpoint of physical diagnosis, may be truly such, or there may be merely a partial contraction of the gastric wall, or the hourglass may consist of stomach and dilated duodenum instead of two gastric cavities. An x ray examination agreed with the results of auscultatory percussion, which were repeated on various dates and supplemented with tuning fork examination, always with the same result as to an hourglass area.

At necropsy, the gastric area was found to correspond with that previously mapped out, as well as with the markings made just before section. Symptoms of obstruction had gradually increased up to the time of death and we were not surprised to find that the opening was even smaller than the area of contracture suggested. Indeed, the gastric wall was agglutinated for over an inch, and the hourglass opening would just admit a small lead pencil. Even at necropsy, the diagnosis between true hourglass stomach and pyloric contraction with duodenal dilatation, could not be made positively on account of poor illumination, the necropsy having been held at night. The necropsy

was of no further interest except that the diagnosis of contracted liver, previously made by palpation and auscultatory percussion, as well as by the x ray examination, was confirmed. The decision for or against cancer, which always suggests itself in chronic gastric ulcer, had not been made before death, on account of the negative findings in the stomach contents nor was it possible macroscopically. The pathological examination showed that cancerous disease had developed in the site of the old ulcer and had extended considerably throughout the gastric wall. The lower chamber consisted of dilated duodenum, the pyloric lumen being of the size of a slate pencil. Thus, the differential vomiting remains without explanation but, as is well known, it often occurs without thought of hourglass contraction.

Francis Sedgwick Williams, *Annals of Surgery*, 1900, has collected seventy-five cases of hourglass stomach. In only a few was the diagnosis made before necropsy or operation. Twenty of the cases were apparently congenital, and at least forty-three of the fifty-five others were due to gastric ulcer, although one of the ulcer cases was due to ingestion of hydrochloric acid of corrosive strength. One case was due to cancer originating outside the stomach, and two others to adhesions plainly exogastric in origin. In the remaining nine there were adhesions to neighboring organs and, in some of these, the condition may have arisen outside the stomach. John M. Elder, in Vol. XXXV., 1902, of the same journal, refers to a case operated on under the diagnosis of pyloric obstruction, rectified when the organ was exposed. But he criticizes two other cases treated by gastroenterostomy below the hourglass constriction, so that the operation did no good. Thus it is evident that this condition has an importance to the gastroenterologist and although an exact anatomical and pathological diagnosis may not be possible, it certainly seems that a probable diagnosis may be made prior to section, of great practical value to the surgeon and still greater to the patient.

GASTRIC DILATATION.—Although mere enlargement of the gastric area by auscultatory percussion, or as determined otherwise, does not necessarily justify the diagnosis of dilatation, it is of great service in making the diagnosis. We must distinguish sharply among obstructive dilatation, obstruction without dilatation, reflex ischochymia due to pyloric spasm, with or without dilatation, ischochymia due to atony, atonic dilatation, and true gastropnoia. Surgeons have a rule that obstruction at the cardia signifies a small stomach, obstruction at the pylorus, a large dilated stomach. Perhaps this rule ought to hold good, but it certainly cannot be depended on.

CASE III.—For example, a short time ago, I saw just before operation Mrs. T. (No. 1090 of 1904-5), who was said to have a dilated stomach, for which gastroenterostomy was to be performed. I had previously examined the gastric contents which were practically normal in amount, fluidity, and acidity, though the hydrochloric acid was only 10 per cent. There was no significant excess of lactic acid nor of fermentation acids generally, and neither was there ischochymia though I cannot say but that after other than the test meal, she may have had more or less gastric stagnation. In the few minutes allowed me for examination under anæsthesia, it was made out by auscultatory percussion that the stomach was not greatly dilated, the lower curvature

being above the umbilicus. A hard tumor was, however, discovered by palpation of about the size of a small walnut, quite movable and corresponding in range of motion to the pylorus. These results, though scouted by the surgeon, were verified on section. Now although the exact size of the stomach was not of prime practical importance, it is obvious that gastroenterostomy is not indicated unless there is pyloric obstruction and that the operation indicated in such a case is either resection of the tumor as possibly malignant and as a better means of removing such obstruction as may have existed than gastroenterostomy, or, if resection is impossible and the disease is malignant, the stomach should be short circuited by establishing a superior enterostomy. Gastroenterostomy is not an ideal operation since it establishes an abnormal condition and fails to remove the essential focus of disease. It is, at best, a second choice and should not be undertaken unless more radical operation is contraindicated. In this case, the operation, as prophesied, proved a failure.

GASTROPTOSIS.—This condition is frequently confused with atonic gastric dilatation. Indeed, the latter is a relaxation and sagging of the lower part of the stomach, but the term ptosis ought to be limited to a sagging of an entire organ and this is a practical as well as theoretical distinction because a relaxation of smooth muscle is very different, as to treatment and prognosis, from a relaxation of ligamentous structures. Now it is perfectly obvious that gastropnoia cannot be diagnosed, except by guess, until the whole gastric area is mapped out. Generally this can be done by auscultatory percussion, but in doubtful cases various other measures, such as X ray, must be resorted to.

CASE IV.—Patient (No. 56 of 1899-1900) gave a rather vague history of stomach trouble of eight years' duration. There was no ischochymia but hydrochloric acid was only 2 per cent. while the total acidity was 75 per cent. and there was acetic in excess of lactic acid. The right kidney was movable in the first degree, the left in the second. At first examination, the stomach seemed to be normal in area but we must always remember that auscultatory percussion does not name an area but merely tells us that there is something, of such a form and size, under the body wall and that this something is practically homogeneous in nature. For instance, I have found large hepatic cancers which were perfectly palpable and which, by ordinary percussion gave exactly the same quality of percussion note as the liver, but which were absolutely separable from the liver by auscultatory percussion, whereas on the other hand, equally large cancers, inclosed in normal liver tissue, appeared as part of the liver. With regard to the gastric area, it must be borne in mind that the colon may displace the stomach or be overlapped by the latter, and in the case under discussion the area which at first seemed to represent the stomach was really the splenic flexure. In this case I attempted to pass the gastrodiaaphane which revealed some very interesting conditions. First of all, the cardia was found to be depressed several inches. The diaphane encountered resistance and we could get no luminous shadow of the stomach. The patient vomited about 250 c. c. of œsophageal mucus and, so far as could be judged from the sensation, the kinking of the tube and wires supporting the diaphane, the capacity of the œsophagus as indicated by the mucus, and the failure of diaphany, the diaphane had simply turned on itself in the œsophagus. I may explain that my diaphane consists of an ordinary stomach tube, in the end of which is an annealed glass vial tightly stopped with rubber, through which the

wires pass into the little electric lamp which is thus protected against breaking, or rather the stomach is protected from bits of glass in case the lamps should explode. The inflexible end of the apparatus is nearly two inches long. This apparently turned in the œsophagus. More careful auscultatory percussion, while still revealing the same area as originally, now showed the presence of a sling stomach, extending an inch or more above and below the umbilicus and having the characteristic shape of a crooked neck squash. This area was enlarged by blowing air through a stomach tube, while the upper area did not increase in size. Moreover, the air could be heard entering the lower area and not the upper. Even palpation showed that the lower area was in continuity with the œsophagus while, on inflating the bowel through the anus, the upper area increased slightly in size and became more highly tympanitic.

CASE V.—Patient (No. 79 of 1903-'4) illustrates the more common type of gastropexy not amounting to sling stomach but distinct from atonic dilatation. She, by the way, had been much improved in the past by wearing Dr. C. D. Aaron's belt. The lower border of the gastric area, verified by various means already discussed, came to the umbilical equator. This in itself would not justify the diagnosis of gastropexy. The majority of such cases should be called atonic dilatation. Here, however, the upper border of the area was at the eighth rib, whereas it should reach the seventh, sixth or even the fifth if the stomach were greatly distended. In such cases, radical cure is practically impossible without gastropexy which is still *sub judice*, but symptomatic cure can be accomplished by a belt and care as to gastric chemistry and motility.

156 WEST CHIPPEWA STREET.

DIARRHŒA AND ITS DIAGNOSTIC SIGNIFICANCE.

By JAMES P. TUTTLE, M. D.,

NEW YORK.

Diarrhœa is a symptom and not a disease. It consists in abnormal frequency and fluidity of the alvine passages.

It is associated with such a variety of diseases that without careful differentiation it is impossible to tell its import. It occurs in nerve derangements, in general constitutional diseases, and in local affections of the alimentary canal. Its features are more or less distinct in each type of disorder. In some conditions it is only one of many symptoms indicating the stage or progress of the disease, and is not of primary diagnostic importance; e. g., in typhoid fever, pulmonary tuberculosis, pancreatic diseases, and tabes. In others it is the first and most characteristic symptom leading to early and saving diagnosis. A patient may have concurrent diarrhœa due to enteritis or nervous relaxation along with any other disease. It is the character or quality of the diarrhœa, the concomitant symptoms, and not the frequency of stools that indicate its cause and seriousness.

Foster, in his *Encyclopædic Medical Dictionary*, defines 101 different diarrhœas, but they may all be classified under one of six types: Simple diarrhœa, serous diarrhœa, lenteric diarrhœa, toxic diarrhœa, mucopurulent diarrhœa, and reflex diarrhœa.

SIMPLE DIARRHŒA, as the name indicates, consists in an abnormal frequency and fluidity of the alvine discharges. The stools contain no undigested food or pathological elements; they are normal in reaction; they are unaccompanied by tenesmus or burning pain; they rarely disturb the patient at night; they cause no progressive loss in weight or strength, and they are not associated with digestive disturbances. This type of diarrhœa is more a habit than a disease. It occurs in large eaters and drinkers, especially those who drink much beer or dry wines. The only inconveniences from which they suffer are frequent calls to the toilet, pruritus and excoriation of the anus due to repeated cleansing of the parts and occasionally hæmorrhoids. The condition is of no diagnostic importance.

SEROUS DIARRHŒA, i. e., an outpouring of almost pure watery stools, indicates generally some marked nervous disturbance, such as great excitement, strain, or exhaustion. I have known it to occur habitually in a great surgeon just before entering upon a major operation, in students before examinations, in soldiers before a battle. It frequently follows great nervous or mental strain. It often occurs in the crises of acute diseases. It occasionally occurs as an intestinal crisis of locomotor ataxia, but more often these patients suffer from bearing down pains in the rectum with frequent desire to go to stool without any adequate discharges.

It occasionally occurs in chronic nephritis as a vicarious offering on the part of nature to relieve disabled kidneys, thus indicating the importance of careful urinalysis in sudden serous diarrhœa. It is said to occur in hysteria but this is only another evidence that hysteria is only an expression of nervous excitement or exhaustion the cause of which should be elicited.

Such diarrhœas are associated with relaxation of the sphincters and the patient is often unable to reach the toilet or make proper preparation before the discharge occurs; they are not accompanied by much griping or any premonitory symptoms except a faintness referred to the abdomen and frequently a cold perspiration. They present no evidences of gastroenteritis but point directly to some derangement of the nervous system which causes an outpouring of serum into the intestinal canal the mucous membrane of which is rendered more susceptible to stimulation by the same cause.

LIENTERIC DIARRHŒA, a condition in which undigested particles of food are found in the stools points firstly to too much, improper, or imperfectly masticated food, and secondly to impairment of the digestive processes.

The first may be eliminated by the administration of limited amounts of proper premasticated food. The character of impairment in the second class of cases whether it be stomachic or intestinal may be determined by the nature of the discharged particles. If they are nitrogenous the fault is in the stomach; if carbohydrates it is in the liver, pancreas or intestine. Lienteric diarrhœa, however, may point to most serious organic lesions. It is difficult to realize what serious involvement of the stomach may exist with-

out any marked gastric symptoms. I have recently seen a case in which four fifths of the stomach and the transverse colon were involved without any nausea vomiting or eructations, and cases have been reported in which perforation of the stomach into the colon had occurred without any marked symptoms except lenteric diarrhœa. The import of such diarrhœa, while generally simple, is sometimes very serious.

TOXIC DIARRHŒA is due to the ingestion of decayed or poisonous substances, whether organic, inorganic, or bacterial. It includes such specific diarrhœas as cholera, cholera morbus, cholera infantum, dysentery, etc., and those of ptomaine, arsenical, strychnine, mercurial, and other poisons. It begins in nausea and vomiting with loose fœcal stools gradually running into the serous type and terminating if protracted in bloody mucopurulent discharges.

The simpler types are relieved promptly by thorough cleansing of the alimentary tract by oil or salines but the more serious ones due to specific or corrosive poisons are not so easily controlled and their significance is therefore more important. It is eminently proper in all such cases to administer the laxative at once but if the diarrhœa is not controlled a careful examination of the stools should be instituted. Ptomaine, fermentative diarrhœas and those due to corrosive substances are usually profuse painful and associated with nausea and vomiting. They can generally be associated with some ingested substances. Dysentery, however, cannot be so associated, it gives very little griping pain, especially the amœbic form; it rarely causes nausea or vomiting, and except at the very beginning the stools are not profuse and watery. The pea soup stools of cholera and those of cholera infantum are characteristic and need not be described. Briefly, sudden, painful, profuse diarrhœas associated with nausea, vomiting, and great relaxation indicate some toxic ingestion and not inflammatory affections. It is very true that these cases may run into chronic mucopurulent diarrhœas and when seen for the first time in this stage their origin becomes obscure unless we carefully examine into the type of the commencing diarrhœa.

MUCOPURULENT DIARRHŒA always indicates some lesion of the mucous membrane of the intestine, usually of the colon. When it is periodical, preceded, and accompanied by great griping and tenesmus, the subsequent stools being largely composed of coagulated membranous mucus, the diarrhœa indicates a simple or reflex mucous colitis. A complete description of this disease would be impossible here but I make bold to state that it is not a neurosis, as is so often alleged, but a hypertrophic catarrh probably of infectious nature or due to autointoxication from retained fœcal material at some point in the canal. The condition is sometimes due to constrictions from adhesive bands, to gallstones, to chronic appendicitis, and possibly to floating kidney all of which should be carefully looked for in such cases.

When the diarrhœa is persistent and more or less profuse and accompanied by much griping

it points to ulcerative lesions high up in the small intestine. Especially, is this the case if the stools contain dark or decomposed blood. If the stools are scanty, composed chiefly of glairy mucus, pus and fresh blood with aching pain in the sacral region and not much griping they point to lesions of the rectum or sigmoid. The character of such lesions can always be determined by proctoscopic examinations. Such cases may have a perfectly normal stool in the morning preceded and followed by small mucopurulent stools. This invariably points to lesions in the upper part of the rectum.

A very slight nagging diarrhœa with increased peristalsis, desire to go to stool without satisfactory result and the occasional passage of a little mucus is one of the earliest and most suggestive symptoms of carcinoma of the intestine. It is far more important than constipation, for this occurs late in the disease and after the favorable time for surgical intervention has passed. Such diarrhœas demand instrumental examinations and if the bloody mucus comes from above the field of such observation, exploratory laparotomy.

REFLEX DIARRHŒA might properly come under the head of nervous affections, but they are really not so. They occur in such conditions as enlarged prostate, stone, uterine and abdominal tumors, appendicitis, gallstones and painful affections in most any part of the body.

DIARRHŒA OF IMPACTION: Diarrhœa following marked constipation is always to be looked upon with suspicion. It is very often caused by the lodgment of hard fœcal particles in saculi or diverticuli and by fœcal impactions around or through which the fluid fœces pass. Such cases are always associated with autointoxication which may be mistaken for anæmia or chlorosis. I have seen such a case result in acute mania. This was promptly relieved together with the diarrhœa by cleansing out the mass which was arrested in the sigmoid.

Another case of this kind occurred in a young lady of 25 years of age who spent the entire summer at a New England watering place being treated for chronic diarrhœa, having from four to fifteen stools a day except when controlled by opium. Hæmorrhoidal complications developed and she was brought to New York to consult me for this condition. I found in her upper rectum a mass of fœces as large as a base ball and nearly as hard, from the surface of which protruded numerous grape pits; the examination being made under ether this mass was broken up by forceps and removed, the sphincter muscle having been thoroughly stretched. It was not deemed wise to operate upon the hæmorrhoids at that time as there was considerable infection of the rectum above. The removal of the mass and proper treatment of the small rectal erosions checked the diarrhœa at once without any more opiates.

Foreign bodies in the rectum or any portion of the colon may also act as the cause of diarrhœa. I have seen one case of irritative diarrhœa caused by the lodgment of a false tooth plate in the sigmoid flexure. Coproliths, enteroliths, gallstones escaped into the intestinal canal, foreign bodies taken in through the mouth or inserted into the rectum, may all cause just such diarrhœas as this. When the foreign body

or the impacted mass is low down the diarrhoea is scant in quantity, frequent and with burning sensation at the anus, but with very little griping. When the substance is high up in the colon or in the small intestine there is tenderness over the abdomen and more fluid diarrhoea and considerable griping.

The gist of the whole matter is: Diarrhoea, like pain, is a very variable symptom of diseases. Its characteristics point not only to the seat of the disease but in many instances to its pathological nature. The different types should be carefully considered and when the symptom lasts for longer than one or two days careful stomachic, stool and local examinations should be instituted at once in order that the proper diagnosis may be made while it is yet time to save the patient.

42 WEST FIFTIETH STREET.

DIAGNOSTIC AND PROGNOSTIC VALUE OF AN EXAMINATION OF THE THROAT IN PULMONARY TUBERCULOSIS.*

By W. G. B. HARLAND, M. D.,

PHILADELPHIA.

Although not as well known as it deserves to be it is nevertheless a fact that an examination of the throat is often of considerable value, first in calling attention to the presence of unsuspected pulmonary tuberculosis, and second in arriving at a definite prognosis when pulmonary tuberculosis is known to be present. I propose to discuss the subject under these two heads.

1. The value of a throat examination in calling attention to the presence of unsuspected pulmonary tuberculosis. Anyone who has seen many cases of tuberculosis of the lung will have remarked that the disease is often accompanied by considerable wasting of the mucous membrane of the upper air tract, together with changes in the quality of its secretions. The appearances being to a certain extent characteristic, you can realize that recognition of the local changes will enable the physician to surmise the presence of tuberculous pulmonary disease even though he had before been ignorant of it.

The symptoms associated with these changes in the nose and throat are in themselves suggestive of tuberculosis of the lung unless explained by obvious other cause. These symptoms are constantly recurring colds, continual dropping of mucus from the nasopharynx into the throat, hoarseness and cough.

Upon examination the mucous membrane is often found wasted and bathed with seromucus. Hypertrophies in the nose no longer obstruct, and often one can see the upper pharyngeal wall through the nasal fossae. In such cases, too, there is present a persistent subacute laryngitis.

A combination of such symptoms and appearances should at once arrest the physician's attention and lead to careful inquiry for other signs of the disease: for a history of loss of weight from typhoid fever, pleurisy, malaria, or other disease that is likely to be mistaken for tuberculosis, loss of strength and anorexia. The pulse and temperature should be studied: increase of pulse rate, and subnormal or

slightly elevated temperature being very characteristic. Any of these suspicious signs will more imperatively call for repeated examinations of the sputum and examination of the chest by an expert. (I do not rely upon anyone unless especially skilled.)

The following is one of many similar cases I have seen, and illustrates this type of patient very well:

A young man came to me because he thought he had nasal catarrh; he had been treated for this condition the preceding winter. He had lost about ten pounds at that time, but had regained most of it during the summer. In the fall he began to fail again and had constant colds. Examination showed chronic catarrhal inflammation of the nose and throat; vocal cords red and granular. This appearance, taken in connection with history of loss of weight, at once aroused suspicion of tuberculous infection of the lung. His lungs were examined by an expert and undoubted lesions were found. Under general treatment this patient's health was greatly improved, the colds ceased to bother him and he gained in weight and strength. When seen a year later he was still in good health.

Occasionally tuberculous disease of the larynx will reach an advanced stage before the disease in the lung produces symptoms severe enough to drive the patient to the doctor. The patient will come for treatment of the throat symptoms, and the characteristic appearances in the larynx will lead to an examination of the lung and sputum, the laryngologist knowing that laryngeal tuberculosis is due in the majority of instances to inoculation from sputum coughed up from a tuberculous lung.

The typical lesions are a moundlike swelling between the arytenoids, congestion and superficial ulceration of the vocal cords, infiltration of epiglottis or arytenoids with or without oedema. The mucosa is pale as a rule. Similar appearances may be produced by a number of other diseases, but usually a distinction can be readily made.

The symptoms accompanying these lesions may amount to nothing, or may include cough, hoarseness, loss of voice and pain on swallowing. A diagnosis should never be based upon symptoms alone, but upon laryngoscopic findings taken in connection with them.

In concluding this first part of the subject I might add that it is probable the ordinary breath sounds are altered by the disease in the larynx, thus sometimes masking the local signs present in a diseased lung.

2. The second part of our subject is not less important, it deals with the value of a throat examination in making a definite prognosis. As it is probable that macroscopic tuberculous lesions of the larynx do not ordinarily occur until after the general and local resisting powers have been partly destroyed, the appearance of laryngeal tuberculosis becomes, to a certain extent, an index of the seriousness of the patient's condition.

The presence of any laryngeal involvement makes the prognosis less favorable, though not necessarily hopeless. Statistics¹ have been collected to show that certain sorts of lesions portend less dangerous consequences than others, and that when certain parts of the larynx are affected the prognosis is more hopeful than when other parts are involved. Thus of those with simple infiltration twice as many improved as when deep ulceration was present, and of

* Read before Northern Medical Association, Philadelphia, February 9, 1906.

¹ R. Levy: *Journal of the American Medical Association*, September 16, 1899, p. 707. *Phipps Institute for Tuberculosis Report*, 1905.

those without involvement of epiglottis or arytenoids three times as many improved as when these structures were involved.² It is needless to say that difficulty in swallowing in tuberculous cases is always a most serious complication.

This brief paper has, I hope, shown the importance of having in mind the possible presence of tuberculosis when patients complain of catarrhal symptoms of the upper air tract, and also the advantages of an examination of the larynx in arriving at a prognosis in pulmonary tuberculosis.

223 SOUTH SEVENTEENTH STREET.

BALSAM OF PERU IN CASTOR OIL AS A SURGICAL DRESSING.

By ERNEST V. HUBBARD, M. D.,

NEW YORK.

In surgery, as in other branches of human activity, fashions change. New methods and new remedies supplant often advisedly, older, tried ways of furthering our ends. With the host of drugs constantly thrust on the bewildered physician, a retrospect may sometimes be useful. Reports are lost in musty archives, buried in every sense, and soon forgotten. It is for a method of dressing wounds first practiced by the late Dr. W. W. Van Arsdale, of New York, that I make a plea.

In the year 1893, Dr. Van Arsdale³ reported some original investigations to discover some bland substance to take the place of the prevalent dressings for wounds then in use. His chief objection to such dressings was that they served a wrong purpose, acting effectively as wedges, or corks, when the most important matter is free drainage. Students are taught "Ubi pus, ibi evacuo,"—and further taught to plug such a resulting opening with gauze, in the form of a misnamed drain, which drain is fast converted into a perfect cork. Result: the excretions of the cavity and pus, if it be present, follow the line of least resistance, and burrow deeper. Thus, the very purpose of the "drain" defeats itself. Even a rubber tube will often clog, and act as a stopper.

Realizing that what is needed is a lubricant, practically to oil the dressing, and keep it a permanent exit, Dr. Van Arsdale, after experimenting with different oils, settled on a mixture of balsam of Peru 3ss and castor oil ʒi. According to H. C. Wood,⁴ recent observers find no antiseptic action in balsam of Peru, whereas J. Mitchell Bruce⁵ states that there is a mild antiseptic influence resident in the balsam. Judging from results obtained with the balsam oil mixture, it is probable that the latter author is correct.

Pure ingredients are required to obtain a satisfactory mixture. When the castor oil is of doubtful purity, it should be sterilized (temperature 160° C.) for two or more hours before adding the balsam. The combination forms a permanent mixture, moderately antiseptic, always viscous, and always, in my experience, serving the purpose for which it is used, namely, to furnish a dressing that will not

harden, and will take up the wound discharges as fast as they are formed.

No wound, in the nature of things, can be actually "aseptic" in the strict sense; the tissues, the blood and the lymph take care of a certain amount of infection; with this dressing, this minimum amount of infection is a negligible factor, and so called aseptic wounds do not break down three days later, making a weary progress with granulation and profuse pus toward recovery.

It is to be borne in mind, however, as Dr. Van Arsdale observed, that the dressing is valueless in eczematous conditions, and is no protection against erysipelatos infection.

In a paper published by Dr. Gallant,⁶ a report was made of 29,000 patients with various types of wounds, in which this balsam oil dressing proved entirely satisfactory, and it was through Dr. Gallant that my attention was first called to it. The dressing deserves further trial, and as it seems to be used by comparatively few surgeons, I have ventured to rescue it from an undeserved oblivion.

The writer has himself used it with gratifying results in the following cases:

Three felons; following necessary incision, balsam oil was applied on gauze, not packed into wound; healing occurred in from two to four days. The dressing was changed on second day. The resulting scars are narrow white cicatrices with no deformity of the finger such as is so commonly seen.

An infection under the finger nail and at the base of nail (paronychia and onychia), in a diabetic, averaging two per cent. of sugar in the urine. Wounds occurring in diabetics are well known for their sluggishness and unwillingness to heal. The wound was treated for six weeks with various antiseptics; carbolic acid, peroxide of hydrogen, and bichloride of mercury, as well as drying and stimulating powders were of no avail, and though the purulent areas had been thoroughly opened, and free drainage established, no attempt at healing followed. The application of the balsam oil resulted in complete healing with a minimum scar surface in less than a fortnight. The dressing was changed daily, with no washing out of the wound. The surface never showed any dried, coagulated material.

A burn of the third degree of breast and forearm occurring after operation on a syphilitic patient through water being used too hot, healed in a fortnight when balsam oil was applied, while other customary dressings and mixed treatment caused no progress after a month's trial.

Abscess of forearm following contusion in a six year old child. Incision allowed escape of pus and the probe revealed a cavity two by three centimetres. This was washed with warm saline solution, and a dressing (not a packing), was laid over the wound. The result was complete healing in one week. The dressing was changed daily, and found always moist and pliable.

Three patients with tuberculous cervical adenitis, following excision of caseating glands, were treated with the balsam oil. Union followed in all, though there had been free pus, within four days, with narrow, practically negligible, cicatrices.

Two goitres, one exophthalmic, one hypertrophic; the incision in both healed with primary union. Sinus formation in the healing of wounds made for the removal of exophthalmic goitres is all too common.

In a number of other minor operations, such as removal of multiple lipomata from forearm, primary union resulted in a minimum quantity of scar tissue, and often

² H. A. E. Gallant, Report Upon the Use of a Mixture of Castor Oil and Balsam of Peru as a Surgical Dressing, *Annals of Surgery*, 1897.

³ Harland: Problem of the Treatment of Laryngeal Tuberculosis, *American Journal of the Medical Sciences*, June, 1905.

⁴ W. W. Van Arsdale, The Treatment of Granulating Wounds, *New York Medical Journal*, 1893.

⁵ H. C. Wood, *Therapeutics*.

⁶ J. Mitchell Bruce, *Materia Medica and Therapeutics*.

for cosmetic reasons, if for no others, this is a matter of considerable importance.

Dr. Van Arsdale remarks, in speaking of the use of balsam oil as a dressing for aseptic wounds: "Besides the possible prospect of allowing us to do away with the aseptic fever, which is, in a certain degree, a sort of retention (although of nonseptic products), it offers no advantages over the methods in use at present." The dressing is preferable for aseptic wounds, smaller cicatrices resulting, and, as I have said, this is a most important gain in many cases.

It has been found unnecessary to add to the balsam oil any of the dusting powders, such as iodoform, etc., as Dr. Van Arsdale suggested, sufficient antiseptic properties residing in the original dressing. It is of interest to note, however, that if iodoform be mixed with the balsam oil (ten grains to the ounce), the objectionable odor of iodoform disappears.

Every surgeon expects, with proper precautions, to obtain in the large majority of his aseptic cases healing by primary union. As Dr. Morris⁷ has pointed out recently, many wounds are hindered in their healing by frequent and assiduous destruction of the new and tender epithelium. "If we place cotton or gauze ever so gently upon a surface undergoing epithelial repair, the dressing is harmful, because new cells are caught in the mesh and torn away when the dressing is changed." The balsam oil dressing goes a long way toward obviating the difficulty cited by Dr. Morris. Especial attention is called to the resulting small cicatrices in both infected and aseptic wounds.

138 WEST SEVENTY-FOURTH STREET.

A PECULIAR CASE OF INFANTILE PALSY OF SPINAL ORIGIN.

By F. ROBBINS, M. D.,

NEW YORK.

The combined peripheral paralyses of shoulder and arm muscles observed in artificially born infants result, as a rule, from partial compression of the brachial plexus, and in a typical case affect the deltoid, biceps, brachialis internus, supinator longus, supinator brevis, and infraspinatus muscles. The lesion of the fifth and sixth cervical roots is manifested externally by an inward rotation of the humerus, with extension of the forearm and pronation of the hand. The attitude of the infant in a typical case may be called pathognomonic. The prognosis in uncomplicated cases is fairly good, but the establishment of habit paralysis, due to neglect of the slowly recovering and naturally weaker member, should never be left out of consideration. Oppenheim insists on the necessity of systematically conducted exercise in the therapeutics of the disease. Obstetrical paralysis or infantile palsy is considered as a very rare condition in naturally born infants; and according to Oppenheim and others it occurs only in those cases where the child and especially the shoulder diameter is very large, or where the passage of the shoulders is delayed by a narrow pelvis. The following case is reported for the rea-

sons that traumatism inflicted by forceps, fillet, hand, or pelvis, did not form an ætiological factor, and that a very peculiar phenomenon was developed in the course of the examination.

The little patient was a male child, four days of age, with negative family history, both parents being in good health. He was the fifth child, born at term, without instruments, after an easy labor. The child was not asphyxiated and cried at once. A very competent midwife had attended the confinement. In dressing the baby, she noticed a drooping of its right arm, without attaching great importance to her observation, so little in fact that she freely commented upon it to the parents. In the course of the following three days, the infant moved the left arm and both legs in a lively manner, but no voluntary motion was made with the right arm. I saw the child in consultation, when the father summoned professional assistance in order to save, if possible, a sound right arm for the boy, who would have to work for his living.

Examination showed a well developed healthy male infant, weighing eight and a half pounds, perfectly normal in every respect, but for the characteristic limpness of the right arm. When first seen, the baby happened to be nursing at the mother's left breast, and his right arm hung as if devitalized, instead of being flexed and crumpled in the normal baby attitude when feeding. Investigation was rendered rather difficult by the evident existence of some degree of pain, on the outer side of the upper arm, reaching nearly to the shoulder. There seemed to be no voluntary flexion at the elbow, and on passive flexion of the right arm it fell down limp and heavy with open hand, whereas the left arm similarly treated not only remained flexed, but the fist doubled and opened. When both hands were placed on the chest, the tips of the middle fingers touching, the left was at once raised and aimlessly waved about, whereas the right did not shift its position the fraction of an inch. The touch of a feather or a drop of cold water on the left side provoked active movements, on the right side invariably, even while nursing, a fit of crying. This appeared less due to pain or discomfort, than to the infant's resentment of the helplessness of the paralyzed member. There was never the slightest evidence of voluntary control of the right arm, although the baby was kept under careful observation for hours at a time. Given the short duration of the existence of both patient and disease, trophic disturbances were of course not to be expected.

For experimental rather than for therapeutical purposes, the infant was stretched out at full length upon the bed, its arms placed above its head, the middle fingers touching. A pull at his feet brought both arms down at once, flexed in the attitude of defense on the chest, both being flexed at the elbow, and then extended to drop along the body. This experiment was repeated several times, in fact as often as seemed compatible with the rights of the infant. It invariably yielded the above result, no theoretical explanation of this phenomenon having suggested itself since the time of the observation. There was no evidence of cerebral implication, as observed by Raymond in the birth palsies of spinal origin, in this case, which was typical in every way of the combined shoulder and arm paralyses described by Erb and Duchenne.

The fact seems remarkable that exactly that position, in which the greatest amount of tension is brought to bear upon the fifth and sixth cervical, should have resulted in a temporary restitution of conductivity in the musculocutaneous nerve. Of course, the observation may be interpreted as indicating that the cervical roots have only been stretched, but not torn off, at their point of egress

⁷ Robert T. Morris, *The Idea of Gross Cleanliness in Surgery, and Its Harmful Results*, New York, 1905.

from the spine. The phenomenon may therefore prove of some diagnostic and prognostic value. Great care should be taken in eliciting it, so as to avoid the infliction of further injury. The infant must be placed on the bed, or preferably on a padded table, in such a manner that the arms cannot become rotated backwards and downwards when brought together above the head.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at frequent intervals. So far as they have been decided upon, the further questions are as follows:

XLVII.—How do you treat whooping cough? (Answers due not later than February 15, 1906.)

XLVIII.—How do you treat pruritus ani? (Answers due not later than March 15, 1906.)

XLIX.—How do you treat lumbago? (Answers due not later than April 16, 1906.)

Whoever answers one of these questions in the manner most satisfactory to the editors and their advisors will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but not REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLVI has been awarded to Dr. James Porter Fiske, of New York, whose article appeared on page 401.

'PRIZE QUESTION NO. XLVI.

THE TREATMENT OF SPRAINED ANKLE.

(Continued from page 456.)

Dr. W. F. Clary, Jr., of Memphis, Tenn., says:

A sprained ankle usually occurs from a misstep, a fall upon the foot, or a sudden twisting of the foot. The injury is a partial or complete rupture of one or more of the ligaments of the ankle joint. The treatment depends both upon the amount of injury done and upon the time elapsing after the injury until treatment is instituted.

In all cases I believe hot applications are better than cold. If the case is seen within a few hours after the accident, the foot and ankle are tightly bandaged with a flannel bandage and placed in a tub of hot water. At intervals hot water is added to maintain a temperature of about 110° to 115° F. The ankle is kept immersed in this water for two hours, or even four hours, if the swelling is great. This treatment relieves the pain, reduces the swelling, and prevents further hæmorrhage if any vessels are ruptured. Then the bandage is removed, the foot and lower half of the leg is shaved, if hairy, and thoroughly dried. When the wrinkled condition of the skin disappears and it assumes its normal color, a Gib-

ney's adhesive plaster dressing is applied, slightly rotating ankle to approximate the ruptured ligament. It is best to have the foot fixed at right angles to the leg. The shingling of the crippled ankle with these adhesive strips maintains comfort and gives a feeling of security to the ankle. The patient is enabled to use his ankle at once, often without crutch or cane. This class of cases I advise to walk on the injured foot from the start of the treatment.

If the injury is extensive, ligaments completely ruptured, swelling great, pain severe, and I am late in seeing the case, hot water often increases the pain. So I find compresses saturated with lead water and laudanum firmly applied are of great benefit.

If excoriation is present, the application of compresses wet with a 2 per cent. carbolic acid solution is best. If considerable extravasation has occurred, I use compresses kept continually wet with a solution of ammonium muriatum 3i to alcohol pt. i. Occasionally we need a counter-irritant and iodine is best. Paint with the tincture and apply an ointment of lead iodide 3iss to petrolatum 3i.

Very rarely is it necessary or advisable to incise or aspirate, under the strictest aseptic precautions, a large and distinct hæmatoma. It is best to use friction and massage in case of clots.

For a permanent dressing of a sprained ankle I prefer the Gibney dressing. If complicated by fracture or dislocation then I use plaster of Paris to fix the ankle. In neglected cases where a weakened ankle is the result, the necessary support is given by strips of adhesive plaster, properly applied.

Dr. Walter Lathrop, of Hazleton, Pa., remarks:

Before considering the best treatment for a sprain of the ankle, it is well to understand what conditions may exist under this title.

The injury is usually caused by a fall, a blow, or sudden misstep in which the normal range of motion is greatly exceeded. The result may be a rupture of the external lateral, or other ligaments, tearing of the synovial membrane, and nearly always putting an excessive stretch on the muscles and tendons.

The old saying that a bad sprain is worse than a break, is sometimes stating a fact, but not when prompt treatment can be given the injured part. The prominent symptoms of a sprain of the ankle, are pain, swelling, effusion, great weakness of the joint, exquisite tenderness on pressure or manipulation, and loss of power to a greater or less extent, depending on its severity. Ecchymosis or discoloration is more or less constant, depending on whether the case is treated early or late.

My own experience with these cases has been quite extensive, being located in a field where mines, railroads, and shops are numerous, and our cases of sprain of the ankle, both in dispensary and house patients, number a good many each year.

In the treatment of these injuries, the first and chief indication is to put the joint at rest and thus prevent any abnormal motion. Where there

is evidence of a severe wrenching of the ligaments or synovial membranes without actual rupture of either, we will expect to have marked swelling and subsequent discoloration; this can be prevented to a marked degree if seen soon after the injury is received. The very best treatment for this condition is to place the foot and ankle into water as hot as can be borne, and while in the water have the ankle thoroughly massaged for at least twenty minutes, or even longer if deemed advisable. Follow this treatment by carefully strapping the parts with adhesive plaster by Gibney's method. Elevate the foot and keep the patient quiet. You will have little or no swelling, little or no discoloration, and a most satisfactory result.

In those cases where the ligaments are ruptured, especially the external ones, the use of the hot bath is indicated, also massage to assist in preventing undue swelling; and after that the foot and ankle should be immobilized by means of a plaster cast, which should not be disturbed for at least ten days unless unforeseen complications develop, which is very unlikely. These cases will usually require three or four weeks of immobilization either complete or partial, and in some instances the wearing of an elastic support for several months.

In cases seen late, where swelling, etc., has already occurred, and home treatment has been given, we can only aid Nature by insisting on rest, the use of lead water and opium, and the use of a splint or cast.

Finally, I would emphasize, based on treatment of a large number of cases, the great value of hot water, massage while in the water and then strapping and elevating the parts. This procedure gives admirable results in the class of sprains first mentioned; while the plaster cast is nearly always indicated in the second class where rupture of the ligaments has occurred.

Dr. V. E. Watkins, of the U. S. Army, Plattsburgh Barracks, N. Y., says:

For the purpose of instituting proper treatment, I divide sprains of the ankle joint into two classes: First, those complicated by fracture; and, second, those where there is simply more or less stretching or rupture of the ligaments. The first class, or sprain fracture, is treated as a fracture by a plaster of Paris dressing and passive movements of joint after a lapse of three weeks. But it is to the treatment of the second class, or simple sprains, this discussion is directed.

There are three indications to be met in the treatment of this condition, viz.: to prevent or subdue inflammation; to hasten the absorption of inflammatory products; and, most important of all, to prevent impairment of function of joint. The earlier the injury is seen and remedial measures instituted the more favorable the prognosis under any plan of treatment.

I first shave the dorsum of the foot, ankle, and lower third of the leg; then, while an assistant strongly flexes the foot on the leg, I apply strips of adhesive plaster twenty inches long and one half inch wide as follows: Beginning at outer side of foot at metatarsophalangeal joint, a strip

is brought across plantar aspect of foot, over the dorsum to outer malleolus, around posteriorly to inner malleolus and over front of joint, another strip is similarly placed, except that its application is started from the inner side of the foot. The third piece of plaster is applied by placing the centre of the strip on the ball of foot, and bringing the two ends by a figure of eight turn across the dorsum of the foot and over both sides of the ankle. A series of these strips is then applied until the joint is completely covered for at least one inch below and two inches above the malleoli. A few turns of a gauze bandage are then applied over the plaster, and the patient directed to put on socks and slippers and walk around.

If there was much swelling at the time of applying the strips, they are removed at the end of twenty-four hours, and new ones applied. This is done every day until the swelling disappears, the leg being washed with alcohol before each redressing. The use of the strips is continued until all symptoms have disappeared. The strips from the sole of the foot will keep the foot at a right angle with the leg, and acting with the strips around the ankle, secure a sufficient degree of immobility.

The advantages claimed for this method of treatment are:

(1) It obviates the necessity of keeping the patient in bed, a most important item with some.

(2) It hastens the absorption of effusion in and around the joint by the pressure of the adhesive strips.

(3) It allays inflammation by providing a sufficient degree of rest for the joint.

(4) It prevents any possibility of impairment of function by securing a moderate amount of motion in the joint from the very beginning.

(5) It effects a cure much sooner than the old methods of rest in bed, anodyne applications, etc.

Dr. E. M. Harris, of Russellville, Ala., writes:

With respect to treatment of sprains of the ankle it may be stated that immediately following the occurrence of the injury the application of cooling lotions, particularly the pouring of cool water, no ice water, upon the affected joint, is indicated. Later treatment by inunctions and massage may be beneficial. But the feature of the general treatment to which the writer desires to direct especial attention has reference to the question of enforced exercise. Numerous examples of ankle sprain seen almost daily among a large body of men engaged in digging brown ore (iron ore) afford striking object lessons in the good of continued exercise. So generally has this fact been observed by even the men themselves that the maxim, never incase a sprained ankle, has been appropriated as a matter of common knowledge.

Contrary to the usual advice, that of immobilization and rest, the prime importance of moderately steady exercise, moving about on the feet, is urged as being the surest way to prevent the stiffness, swelling, and soreness, and as being promotive of most speedy permanent relief.

(To be continued.)

Therapeutical Notes.

Treatment of Facial Neuralgia.—In the Consultation Department of the *Medical Bulletin* (February, 1906), J. V. Shoemaker prescribes the following for the relief of acute facial neuralgia:

- R Butyl. chloral. hydrat., 8 grammes;
 Alcoholis, 8 c.c.;
 Elix. Guaranæ, q. s. ad 100 c.c.
 M. Sig.: A teaspoonful every half hour or hour.

Painful Digestion.—For the dyspeptic pains coming on some time after eating a meal, the following powder is given in hot water:

- * Sodium bicarbonate, 0.50 gramme;
 Prepared chalk, 0.30 gramme;
 Calcined magnesia, 0.20 gramme;
 Powdered belladonna, 0.02 gramme;
 Cocaine hydrochloride, 0.01 gramme.
 M. For one dose.

Le Progrès médical, January 20, 1906.

The Dietetic Treatment of Gastric Ulcer.—Senator, instead of the former rigid milk diet for a case of round ulcer of the stomach, gives a slightly nitrogenized food, containing gelatin, sugar, and fat, which causes no irritation on account of its liquid condition, and is nutritive as well as hæmostatic. The method followed in its preparation is to dissolve fifteen to twenty grammes of pure, white gelatin in 200 grammes of water, to which is added fifty grammes of lemon sugar. This quantity is to be taken in twenty-four hours, at the same time as 250 c.c. of cream and thirty grammes of butter. This food represents about 900 to 1,000 calories. The gelatin may be replaced by analogous substances (such as calves feet, fish glue). In like manner, the butter may be substituted by fine olive oil, milk of almond, etc., according to taste. In general, at the end of a week the addition of raw chopped meat is permitted.—Society of Internal Medicine of Berlin reported in *La médecine orientale*, February 10, 1906.

Successful Treatment of Leprosy.—Von Neumann reported to the Society of Physicians of Vienna (*La médecine orientale*, February 10, 1906) the very noteworthy case of a man of forty-three years of age, a Bulgarian, who five years ago came under treatment for maculotubercular leprosy. The skin of his forehead at that time was brown, the eyebrows, the eyelids, and the cheeks were thickened, and the body was covered with numerous red spots. The abdominal wall and the legs presented multiple nodules, which were hard, livid, or brown. In his expectoration and his nasal secretion, also in fragments excised from the skin, the bacilli of lepra were discovered. The patient was treated with injections of Chaulmoogra oil and Fowler's solution. He was also given inhalations of potassium iodide. Under the influence of these medicaments all the clinical symptoms have disappeared. This case, therefore, proves that the medical treatment of leprosy deserves to be taken into serious consideration.

Nitrobenzin as a Dressing for Wounds and Other Surgical Applications.—Crouzel recommends the addition of artificial oil of bitter al-

mond (nitrobenzin or oil of myrbane) to ordinary benzin to make it more acceptable as a wound dressing. Guaiacol also may be used for this purpose. For local application various alkaloids and other drugs are soluble in benzin and can be used in this way (quinine, morphine, strychnine, also camphor, iodine, sulphur, phosphorus, etc.). Solutions of paraffin and of gutta percha in benzin enable us to make impermeable dressings for a wide range of purposes. In dressing painful wounds, the benzin may be made strongly anæsthetic by the addition of menthol. The local anæsthesia obtained in this way will permit of the incision of paronychia and certain abscesses. The addition of five per cent. of petrolatum to benzin will protect surgical instruments from rusting if after cleansing and sterilization they are dipped in it and withdrawn.—*Journal de médecine de Bordeaux*, January 21, 1906.

The Influence of Mastoid Operations Upon the Course of Diabetes Mellitus.—From an experience, which included thirty-three mastoid operations in diabetics, Körner (*Mitteilungen aus dem Grenzgebiet der Medizin und Chirurgie; Zentralblatt für die Gesamte Therapie*, January, 1906) reports that in the light form of diabetes surgical operations for a time increase the quantity of sugar, without having any unfavorable influence upon the patient otherwise. No instance was observed in which the light form of diabetes was transformed into the grave form, as a result of operation. The occurrence of coma after operation is only to be feared when the diabetes, prior to the operation, already has the clinical signs of the grave form, especially when the urine contains a large proportion of acetic acid. Therefore, the light form of diabetes mellitus does not constitute a contraindication to an operation. Operations in the moderately severe or in the grave forms, on the other hand, are permissible only in cases of emergency to save life.

Therapeutics of Phthisis Influenced by Heart Lesions.—C. Sabourin (*Journal des praticiens and Bulletin général de thérapeutique*, January 23, 1906) calls attention to the frequency of diseases of the heart and bloodvessels in consumptives. He declares that about one half of the subjects of pulmonary tuberculosis have some defect of the cardiovascular apparatus. Very probably, in certain cases, the pulmonary complication is the result of the circulatory defect. However, it is certain that phthisical patients with heart lesions are subject to acute or subacute attacks which are directly attributable to the heart lesion, and, on the other hand, that it is among these that hæmorrhages accede from the lungs, or elsewhere, of alimentary origin. The frequency of these two categories of accidents being granted, it is of the highest practical importance for the physician to search for cardiac defects in tuberculous subjects, and where they are detected, even if in a latent state, it is prudent to carefully regulate the patients' habits of living, and their food, to guard against the accidents which may occur at any time in the course of the pulmonary disease. The knowledge of the existence of such circulatory defects will also enable

us to avoid errors in treatment of pulmonary tuberculosis.

A New Treatment for Furuncles and Carbuncles.—The local treatment by electricity is advocated by Marcus (*Münchener medizinische Wochenschrift*, 1905, No. 21). Previous to the appearance of suppuration, he opens the follicles of the affected area and introduces into them an epilation needle connected with the negative pole. Through this a current of one to two milliamperes is passed at first, which is afterwards increased to ten. By slightly moving the needle around, the opening of the follicle is considerably enlarged, and a quantity of frothy serum is soon poured out, containing portions of tissue and numerous cocci. Then the needle is removed, the spot is carefully cleansed; the needle is again introduced and one or two milliamperes are again allowed to pass. The positive pole is now to be connected with the needle, and the current again raised to ten milliamperes. This causes the liberation of acid, which is always more energetic in its nascent condition. In two or three minutes the treatment is suspended and the surface again washed with water. Each affected follicle is treated in the same manner. If suppuration has already commenced, a larger needle is introduced into the follicles and moved around, until the entire greenish yellow pus plug is broken up and disappears in foam. Then the positive pole is introduced and again followed by the negative pole. A wet dressing is applied. This treatment is not applicable to very large carbuncles or extensive swelling.

Treatment of Exophthalmic Goitre by Röntgen Rays.—R. Stegman refers to three cases of Basedow's disease of many years' duration, which he had successfully treated by exposure to the Röntgen rays. The fears of the reporter at the outset that the breaking down of the gland substance and its absorption might produce hyperthyroidism were groundless. In his experience with thirty-five goitrous patients also subjected to this method, and who were carefully observed during a rather long course of treatment, there was not at any time any evidence of poisoning of this kind. The author adds the details of a third case of Basedow's disease to the two already reported, one of which he had presented at a session of the society of physicians in Berlin. Upon the results of his treatment in these three successful cases, he concludes that it is beyond question that a very favorable influence and cure of Basedow's disease is possible through radiation of the altered thyroid gland. Adopting the theory of Möbius as an explanation of the action of the rays, then we have its simple demonstration in the fact that through the radiation of the pathological organ, a lesion of the glandular epithelium takes place, which, in every case, produces a quantitative and qualitative alteration of the secretion. Widerman (*La Tribune médicale*, January 27, 1906) has also treated five cases of typical Basedow's disease by radiation applied to the enlarged thyroid, with the results that the nervous symptoms were materially ameliorated in two cases, and the general health was im-

proved in all and the bodily weight was notably increased. But no improvement was noticed by this reporter, either in the exophthalmus or in the tachycardia.

On the Employment of Adrenalin Hydrochloride in Therapeutics.—At the meeting of the Société médicale des hôpitaux (December 22nd), Gaillard reported a case of hæmoptysis in a tuberculous patient, in whom an intrapulmonary injection into the second left intercostal space of half a milligramme of adrenalin at once stopped the hæmorrhage. The needle had directly entered the cavity from which the blood came. At the same meeting, Marcel, Labbé, and Ameville reported a case of purpura hæmorrhagica, which had been treated by calcium chloride and ergot without any result, but in which subcutaneous injections of adrenalin (one milligramme daily, divided into several doses) had caused cessation of the hæmorrhages. Josué, at a previous meeting, had demonstrated, after administration of adrenalin, the occurrence of marked elevation of arterial tension, owing to vasoconstriction and increase of cardiac energy. On the other hand, the use of this remedy is contraindicated when the arterial tension is high, when the cerebral arteries are unhealthy, and when arterial aneurysms exist. Adrenalin acts most energetically when injected into the veins. In animals death is produced by acute œdema of the lungs. The lethal dose is variable. The want of uniformity in the toxicity of adrenalin when injected into the veins should absolutely proscribe this mode of administration of the medicament. The toxicity of adrenalin is almost as great when injected directly into the pulmonary parenchyma. Therefore, in spite of the above successful case, it is advisable not to resort to this mode, as a rule, even where hæmorrhage is abundant, for fear of producing grave accidents, especially acute pulmonary œdema. Intratracheal injection is not less dangerous, although successful cases of hæmoptysis, treated in this way, have been reported. Nevertheless, experiments upon animals which demonstrate with what facility death is produced, when adrenalin is injected into the trachea, are not favorable to this technique. The fact that man is more susceptible to the action of this medicament than the lower animals, should make us only more prudent in the use of adrenalin. The ordinary dose for injection is one half a milligramme, or one milligramme, at the most, and only in emergencies of the very gravest and most urgent character. It is less dangerous by the gastrointestinal tract, the ordinary dose being one half to one milligramme. The instillation of the solution into the nostrils of rabbits has not produced any bad results. Injections into the veins, or the trachea of animals, produce chronic intoxication, with hypertrophy of the heart, atheroma, or aneurysms. The very great susceptibility of man to the poison, Josué thinks, should be kept in mind, and by whatever route we give the adrenalin, it will be prudent not to continue its administration longer than ten days for fear of producing arterial and cardiac lesions. —*Journal de médecine interne*, February 1, 1906.

NEW YORK MEDICAL JOURNAL

INCORPORATING THE

Philadelphia Medical Journal
and The Medical News.

A Weekly Review of Medicine.

Edited by

FRANK P. FOSTER, M. D.,
and SMITH ELY JELLIFFE, M. D.

Address all business communications to

A. R. ELLIOTT PUBLISHING COMPANY,

Publishers.

66 West Broadway, New York.

PHILADELPHIA OFFICE:
5713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, MARCH 10, 1906.

THE TRAINING OF NURSES.

It was an excellent idea for the New York Academy of Medicine to arrange for an extensive discussion of the subject of the training of nurses. It is to take place on Thursday evening, March 29th. Mr. George P. Ludlam, superintendent of the New York Hospital, is announced to speak on The Organization and Control of Training Schools; Miss Mary A. Samuels, superintendent of the Roosevelt Hospital Training School for Nurses, on What Nurses Should be Taught; Dr. W. Gilman Thompson, on The Overtrained Nurse; Dr. A. A. Smith, on The Trained Nurse and Medicine, and Dr. Robert Abbe, on The Trained Nurse and Surgery.

It is to be regretted, we think, that no provision has been made for the relation of training schools to obstetrical nursing. In other respects the field bids fair to be very satisfactorily covered, for all the speakers have had long experience with the various aspects of the work of nursing and with the fitting of pupils for the profession of nursing. It seems to us that the topic assigned to Dr. Thompson is, if not the most important, at least the one most in need of discussion, though it may be questioned if the phrase "the overtrained nurse" quite expresses what he is expected to speak upon. We are not aware that there ever was a nurse who could properly be said to have been overtrained, though the nurse who has been stuffed with medical and surgical information which she has not thoroughly digested is a creature far too commonly met

with. She is prone to regard that information as having little bearing upon her duties, but rather to look upon it as qualifying her to sit in judgment on physicians, which she frequently presumes to do in a meddlesome and sometimes an offensive manner.

Training, as we understand it, is drilling, and a person who is to carry out the instructions of another cannot be too thoroughly drilled. Pedagogy is another matter. We have never been able to understand what great good was expected from imparting to nurses a smattering of medicine and surgery. True, they need to know very thoroughly the minor routine of procedures, such details as are likely to be delegated to them by the practitioner, also how to observe and report upon the manifestations of disease, but to feed their vanity with the notion that they are competent to take any considerable part in ordering the management of the sick is certainly a most erroneous step. We shall be much astonished if this view is not upheld in the discussion.

THE MEDICOLEGAL SOCIETY OF WASHINGTON *VERSUS* ST. ELIZABETH ASYLUM.

There are two sides to be considered in judging of all charges brought against either an individual or an institution. In no case of late years has this necessity been more apparent than as to the charges of cruelty to patients, mismanagement of affairs, and undue expenditure of money brought by the Medicolegal Society of Washington, D. C., against the management of St. Elizabeth Asylum, or the Government Hospital for the Insane. Perhaps the best commentary on the society's action in this matter is the fact, as the *Washington Times* states, that these serious charges against the asylum management were not first brought to the attention of the President and Secretary Hitchcock instead of being made public through the press.

As to the charges, that of cruelty to the patients can, it would seem, be dropped. The testimony of the board of visitors, who are men of the highest standing in the community and from constant and daily experience are in a position to know whereof they speak, emphatically contradicts it. Every doctor and even the laity recognize the fact that, with upwards of three thousand insane patients to treat and control, the proportion of violent cases must be large, and they also know, many of them from personal experience, that it is as a rule the patient who assaults the attendant and not the reverse. The handcuffs and food tubes, the saddle, and other mechanical appliances have long since been done

away with, and all this part of the sensational story may be considered as simply a glittering bait to allure the average congressman or to work on the sympathy of the members of the grand jury. Even the *Evening Star* admits that the charges of cruelty are of less importance than those of maladministration and overexpenditure. This, however, is simply a matter of bookkeeping, and Dr. White, the superintendent, is in a position to explain his method to the committee of Congress to be appointed by the speaker according to the bill introduced by Representative Clark, of Florida. Dr. White has the active support and perfect confidence of the board of visitors, and the whole inquiry will doubtless end as one did a few years since when certain charges were made in regard to the quality of the beef served to the patients. They made considerable stir at the time, but when sifted to the bottom were found to be without truth.

Such being the facts, it would be interesting to trace the animus of this attack were it possible, but it is not. The rude annals of the poor, particularly the insane poor, are not open books to be read by them that run and are pathetic in the extreme. Here, for instance, in this very hospital there is an old soldier who for fifteen years had had but two letters and been visited by no one. Later he came into an accrued pension of a few thousands of dollars, and then he became an object of interest. Friends were found, relatives were discovered, each anxious to give him all the comforts of home and mother. As he could not take care of himself, much less of his money, Dr. White refused to discharge him, as he has done in all similar cases, and the cry of inhumanity is raised. This is a mad world, particularly in the wards of an insane asylum, and yet can anyone deny that, were it not for the money, this idiotic soldier would have been allowed to continue to pluck at the bedclothes in unmolested peace and to stick straws in his faded hair unwept, unhonored, and unsung?

PROTOPATHIC AND EPICRITIC SENSIBILITY.

From the era of vague, mystic interpretations of the functions of the nervous system, preceding the work of Alcmeon, of Crotona, whom history is inclined to acknowledge as one of the earliest dissectors and vivisectioners and one who localized in the brain the perception of sensations and thought, up to the present time, there has been no structure in the human body, the functions of which have been more energetically investigated. For the practical physician, however, the controversies of the histologists have been of secondary

interest, but now even in the field of clinical neurology we find that grave doubt is being cast on our fundamental tests for sensibility, on which the foundations of diagnostic investigation of the sensory nervous system has rested. That the usual test of light touch, so widely used in practical work and so extensively written about in textbooks, is untrustworthy, is the conclusion reached by a number of recent clinical investigators, notable among whom are Henry Head, W. H. Rivers, and J. Sherren, of England.

In a recent study (*Brain*, Autumn, 1905) on sensations these authors have brought forward a new standpoint of interpretation and have tried to show that two essentially different phenomena of sensation are to be distinguished where formerly one only was thought to exist. What has always been called the diminished sensibility produced by the division of a nerve is really a condition in which some kinds of sensibility are lost and some retained. To demonstrate these facts, Head had performed on his own arm an interesting experiment. He had the cutaneous branch of the radial nerve cut, and having determined the sensibility of his arm by a large number of tests before the operation, made a series of comparative tests.

Following this operation, he first noted that there was a loss of all forms of cutaneous sensibility, namely, to cotton, pin prick, heat, and compass points, but that sensibility to dull objects or light touch suffered no impairment. Thus the very means, i. e., light touch, most often used to determine loss of sensibility proved to be least reliable. After several weeks he observed further that sensibility to pin prick slowly returned, but that even after a lapse of two years sensibility to cotton wool and compass points remained impaired. It was further shown that temperatures below 32° or above 50° F. were appreciated as cold or warm, but between these two points no quantitative changes were detectable.

He concludes as a result of this experiment, confirmed by a large number of examinations of peripheral nerve injuries, that ordinary touch sensibility is to be thought of as at least of two types. One is a sensibility which is able to produce qualitative changes in consciousness, but is incapable of being estimated as far as its intensity is concerned apart from the area of surface stimulated, which is unable to distinguish the position of points in an area, and which causes a widespread reaction not infrequently referred to a distance. To that form of sensibility showing these characteristics he gives the name "protopathic." After an injured part has remained for

some time in this condition it becomes sensitive to light touch and to degrees in temperature. It begins to be able to discriminate the two points of a compass, and accuracy of localization becomes possible. This form of sensibility is termed by these authors "epicritic sensibility."

Thus, following these investigations, it may be shown that the afferent nervous system shows different types of response to stimuli. A deep sensibility is already well known, which is capable of answering to pressure and to movement of the parts and even producing pain under the influence of excessive pressure, as when a joint is injured. The nerve fibres subserving this form of sensibility run mainly with the motor nerves and are not destroyed by the division of all the sensory nerves of the skin. The other form, namely, protopathic sensibility, is capable of responding to painful cutaneous stimuli and to the extremes of heat and cold. It constitutes the great reflex system of the body and is unaccompanied by any definite appreciation of the spot stimulated, whereas, the epicritic sensibility is that by which consciousness gains the power of cutaneous localization, of the discrimination of two points on the surface, and of the finer grades of temperature called cool and warm.

The authors therefore put forward a new conception of the nature of the afferent fibres in the peripheral nerves. They say that the whole body, within and without, is supplied by a protopathic system. The fibres of this system in the skin may be spoken of as somatic, those to the visceral organs as visceral protopathic fibres. Thus, they would no longer speak of the afferent sympathetic system, but of the protopathic supply of the internal organs. Another set of afferent fibres peculiarly associated with the impulses of movement and pressure exist in connection with the Pacinian organs. In the body and limbs an analogous system is found peculiarly susceptible to pressure, to the localization of movement, and to the appreciation of position. The fibres of this system run in conjunction with the motor nerves.

In addition to these two systems, which are distributed to all parts of the body, within and without, the surface of the body only is supplied by the system which the authors have called epicritic and which has the functions already outlined. The fibres of this system are more easily injured, and are regenerated more slowly than those of the protopathic system. They are evidently more highly developed and approach more nearly to the motor fibres to voluntary muscle in the time required for their regeneration.

EXPERIMENTAL ARTERIOSCLEROSIS.

The subject of arteriosclerosis is being investigated from various points of view by many workers. The experimenters are endeavoring to produce changes in the arteries of the lower animals by injecting and feeding them with various substances, thus attempting to solve the problem of the pathogenesis of the disease. It must be remembered that arteriosclerosis develops slowly in the human being. Let us suppose that alcohol is the cause of it; the condition follows the repeated ingestion of varying doses day after day for years. Let us suppose that high arterial pressure due to muscular exertion is the cause of it; this factor also is operative day after day for years before the pathological changes are so well advanced that they produce symptoms and morbid changes. We do not make these statements to discourage investigation, but merely to remind the investigator that he is dealing with the problem experimentally under different conditions from those that occur in human pathology.

The most recent experimental work has been done by Pearce and Stanton (*Journal of Experimental Medicine*, January). Rabbits were injected in the veins of the ear with repeated doses of a one to one thousand solution of adrenalin. Usually three minims were given every other day, although in some experiments the dose was gradually increased. The early injections sometimes resulted in death from acute dilatation of the heart and pulmonary oedema. In those animals which survived the early injections by the development of a certain amount of immunity, the doses were increased gradually, and they were killed after periods varying from a few days to eight weeks and a half. Ten animals were chloroformed, and the gross lesions were found in the aortas of six. The earliest change in the vessel wall which is apparent to the naked eye consists of a faint longitudinal or irregular grayish streaking of the intima without thickening. Later, irregular isolated or confluent areas of a pearly gray color are found, almost all of which are calcified. Still later, the aorta is more or less distorted, rigid, and nonelastic; but distinct ulceration with atheroma is not readily demonstrable. Diffuse calcification is not infrequent and small aneurysmal dilatations may be present. Microscopically, primary degenerative lesions are well advanced by the end of the third week, and one or two weeks later advanced calcification may be demonstrated. The destruction of the muscle fibres is the older and probably the primary lesion. In the late lesions, when small aneurysms are found, the elastica is so completely destroyed that only an indistinct

mass of fractured granular and fused fibres remains. In two animals which died on the fifth and the ninth days of the experiments, respectively, small longitudinal or occasionally irregular, finely granular foci of degeneration were seen in the media of the aorta. In these areas there were no nuclei visible, and the muscle fibres were transformed into a finely granular, almost hyaline material.

There appears to be one discrepancy in the conclusions of the authors. They distinctly state that the lesion "of the muscle fibre is the older, and therefore, in all probability, the primary lesion." Later they point out "the strong support afforded Thoma's view, that the primary lesion of arteriosclerosis occurs in the media and is essentially the result of changes in the elastica, and that the alterations in the intima constitute a repair process the object of which is to compensate for the weakened media and the widened lumen." They probably mean that physiological disturbances of the elastica result in anatomical changes in the muscle, but the inference is not clear. The experimenters have not succeeded in reproducing arteriosclerosis as seen in man, and this they freely admit. It must be allowed, however, that the resemblance is very close.

THE X RAYS IN THE DIAGNOSIS OF PULMONARY CONSUMPTION.

In a recent editorial (*New York Medical Journal*, February 3, 1906) we referred to the use of the x rays in the diagnosis of intrathoracic aneurysm. That it will be shown that the interpretation of other intrathoracic conditions may be facilitated by the proper use of the x rays is to be expected. The possibilities of the Röntgen rays are by no means exhausted. Pfahler (*Archives of Physiological Therapy*, September, 1905) presents a series of radiographs illustrating the value of the x rays in the diagnosis of pulmonary tuberculous disease. Tuberculous deposits cast definite shadows which correspond to the size, location, and consistence of the lesion. Cavities are indicated by a well marked area of transparency surrounded by a more dense wall. Pleural thickening is shown by a diffuse, uniform shadow which lacks the mottled appearance of that of consolidation. Effusion is indicated by a general uniform shadow occupying the lower part of one or both sides of the chest, and having a definite upper border. Pneumothorax gives a very large, transparent area occupying one side of the chest, and having below it the shadow of fluid. It is to be remembered that it is safe to trust to the interpretation of a radiograph of the lungs only when both interpretation and radiograph are made by an expert.

ASTHMA AND DEAD MEN'S BONES.

Dr. Alfred Terry Short, police surgeon of Manila and lately a contract surgeon in the army, tells a remarkable story in the March number of the *Journal of the Association of Military Surgeons of the United States*, under the heading of A Sure Cure for Asthma (in quotation marks). Dr. Short states that when he was on duty in a small town in Luzon he became acquainted with a well educated and intelligent native Filipino family in which there was a daughter, about nineteen years old, who had been afflicted with asthma since her childhood. Only temporary relief had followed the various measures employed to combat the disease, and the girl remained practically an invalid.

Then an elderly sister began to treat the girl. She assured Dr. Short that her treatment consisted solely in giving the patient three times a day a teaspoonful of a "solution" of some pieces of skull bones that she had found dried and bleached in the cemetery, washed and powdered and added to a quart of water. Before the bottle was finished the asthma had almost entirely disappeared and the treatment was discontinued. Dr. Short saw the "solution," and says that it had "a watery, chalklike appearance." To his knowledge there has been no recurrence of the disease during the period of about two years and a half that has since elapsed. The girl has never known what the medicine was. "In what the potency of the treatment consisted," says Dr. Short, "I will not attempt to state, but I can vouch for the truth of these facts."

In an interesting book by Dr. Henry Carrington Bolton, entitled *The Follies of Science at the Court of Rudolph II* (Milwaukee, 1904), one may learn what remedial virtues were formerly supposed to exist in "the skull of a malefactor" and in "the moss that had grown on the skull of a thief." Now, the poor fellow from whose remains the elderly sister in Dr. Short's case drew her supply of dried and bleached skull bones may not have been a criminal, but his bones were "under a cloud," so to speak, as we may infer from their having been unceremoniously pitched upon a bone heap, probably because those who should have piously looked to the proper maintenance of his grave failed to pay the ground rent. We may therefore imagine that, from a therapeutical point of view, post mortem indebtedness imparts a virtue akin to that of ante mortem criminality—that is, if Dr. Short and the doctors of Rudolph's times may be held not to have been unduly credulous. And what a wonderful store of remedial material was suffered to go to waste on Temple Bar in old times!

News Items.

NEW YORK CITY AND STATE

The Buffalo Academy of Medicine.—The Section in Surgery will meet on Tuesday, March 13th. Dr. George E. Brewer, of New York, will present the paper of the evening (subject to be announced).

The Geneva (N. Y.) Medical Society.—The programme for a meeting held on Thursday, March 1st, included a paper on The Management of Bronchopneumonia in Children, by Dr. F. L. Stebbins, of Geneva.

The Watervliet (N. Y.) Medical Society held a meeting on Thursday, March 1st. Papers were presented by Dr. E. J. Hanratta and Dr. J. C. Shiland. The readers appointed for the next meeting, to be held on April 5th, are Dr. Mann and Dr. L. B. Rulison.

The Buffalo Medical Clinic.—The regular monthly meeting was held on Friday, March 2nd, at the residence of Dr. George A. Sloan. The paper of the evening, entitled Rupture of the Heart, was read by Dr. Clark E. Ernest, who presented a specimen.

The Conference of Anæsthetists will hold a meeting at the Seney Hospital, Brooklyn, on Wednesday, March 14th, at 8 p. m. The subject for consideration will be Charts and Anæsthetic Records. All interested are invited to attend.

Two Health Commissioners for New York.—Among the bills of interest to New York city, introduced in the Assembly on March 6th, was one providing for two health commissioners in New York, one for the Boroughs of Manhattan, Richmond, and the Bronx; the other for the Boroughs of Brooklyn and Queens.

Gifts to Brooklyn Charitable Institutions.—Mr. Peter Wyckoff, an elderly citizen of Brooklyn, E. D. (Williamsburg), has recently donated the sum of \$10,000 to each of the following named institutions: Bushwick and East Brooklyn Dispensary; Homœopathic Hospital and Dispensary; Eastern District Hospital, and German Hospital.

The Rochester (N. Y.) Academy of Medicine.—The programme for a meeting of the *Section in Medicine*, to be held on Wednesday, March 7th, consisted of a symposium on Pneumonia, arranged as follows: *Ætiology, Symptoms, and Diagnosis*, by Dr. Charles E. Darrow; *Pathology*, by Dr. Charles R. Witherspoon (by invitation); *Treatment*, by Dr. Joseph R. Culkin.

The Glens Falls (N. Y.) Medical and Surgical Society held its regular annual meeting and banquet at the Hotel Madden on Thursday evening, March 1st. The scientific programme included papers by Dr. E. B. Probasco, of Glens Falls, on *Diagnosis of Diseases of the Gallbladder*, and Dr. D. C. Moriata, of Saratoga, on *Treatment of Compound Fractures*.

The Elmira (N. Y.) Academy of Medicine.—The following programme was arranged for a meeting held on Wednesday evening, March 7th: *A Few Notes Regarding Apomorphine*, by Dr. H. D. Wey, of Elmira; *Cough*, by Dr. Herbert B. Smith, of Corning; *Prognosis Regarding Length of Life in Diseases of the Kidneys*, by Dr. John C. O'Brien, of Elmira; a paper (title not given), by Dr. O. J. Bowman, of Horseheads, N. Y.

Society of the Medical Inspectors of the City of New York.—The following programme was arranged for a meeting held on Tuesday, March 6th. Presentation of patients; a paper by Dr. Nathan Breiter, entitled *A General Consideration of the Difficulties in the Diagnosis of Cardiac Diseases, with Special Reference to Children in the Public Schools*; *The Diagnosis of Incipient Tuberculosis*, by Dr. John B. Huber.

Enlargement of the Craig Colony.—Contracts have just been made for the construction of five additional cottages at the Craig Colony for Epileptics. When these are completed and occupied there will be 1,250 epileptics at Sonyea. A bill appropriating \$300,000 for additional buildings has been introduced into the legislature. If the bill is passed and the buildings are put up there will be room for 1,800 epileptics at the colony all told—about one eighth of the total number in the State.

The Buffalo General Hospital Alumni Association.—The annual meeting and banquet were held on the evening of Thursday, March 1st. In the absence of the president, Dr. Charles R. Stockton, Dr. William C. Phelps was chosen chairman for the evening. A paper entitled *Internal Secretions* was read by Dr. Frederick C. Busch, of Buffalo. The following were elected officers for the ensuing year: President, Dr. De Lancey Rochester; vice-president, Dr. Howard Maynard, of Medina; secretary and treasurer, Dr. Thomas W. Dwyer.

The Medical Association of Troy and Vicinity.—The programme for a meeting to be held on Tuesday, March 6th, at the office of Dr. E. D. Ferguson, included the following: Presentation, by Dr. James P. Marsh, of cases showing final results in (a) Epiphyseal Separation of the Head of the Femur; (b) Comminuted Fracture of the Neck of the Femur; (c) Complicated Fracture of the Shaft of the Femur; (d) Amputation of the Breast for Hyperplasia. Report of two cases of Tetanus, by Dr. Charles C. Sweet.

The Syracuse Academy of Medicine.—The programme for a meeting held on Tuesday evening, March 6th, included the following titles: *The Syracuse Society for the Prevention of Cruelty to Children*. Civic Pride and Some of the Society's Phases and Its Needs, by Mr. A. T. Baldwin; *The Law and Hypnotism*, by Dr. Ely Van de Warker; *Lavage of the Pelvis of the Kidney*, by Dr. A. M. Wose. The College of Medicine of Syracuse has invited the members of the academy to be present at an illustrated talk by Captain Charles Lynch, M. D., U. S. A., to be given at the college on Wednesday evening, March 14th. The subject will be *Japanese Medical Work in the Russo-Japanese War*.

The Medical Association of the Greater City of New York.—A meeting will be held at the New York Academy of Medicine on Monday, March 12th. The following programme has been arranged for the occasion: Report of the committee on the death of Dr. Emmet C. Dent, Dr. Robert Coleman Kemp, chairman; report of the committee on the death of Dr. George R. Fowler, Dr. Robert Abbe, chairman; report of the committee on the death of Dr. William E. Swan, Dr. Samuel Lloyd, chairman; Symposium on the Present Status of Radiology in Diagnosis and Treatment: (1) *Introductory on X Ray Therapy*, by Dr. A. D. Rockwell; (2) *The X Ray in Medicine*, by Dr. John H. Musser, of Philadelphia; (3) *The Value of the X Ray in Cancer*, by Dr. William B. Coley; (4) *On the X Ray in Surgical Diagnosis*, by Dr. Carl Beck; (5) *The Value of Radium in Surgery*, by Dr. Robert Abbe; (6) general discussion (speakers limited to five minutes), by Dr. Henry G. Piffard, Dr. Edward B. Bronson, Dr. Charles W. Allen, Dr. J. Edward Stubbett, Dr. Sinclair Tousey, Dr. Lewis Gregory Cole.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending March 3, 1906:

	February 24—		March 3—	
	Cases.	Deaths.	Cases.	Deaths.
Measles	1,674	37	1,303	45
Diphtheria and croup	371	62	405	61
Scarlet fever	198	11	222	5
Smallpox	1	..	..	..
Chickenpox	100	1	180	..
Tuberculosis	328	176	475	225
Typhoid fever	30	10	37	7
Cerebrospinal meningitis....	30	21	29	21
	2,732	318	3,251	364

Society Meetings for the Coming Week:

MONDAY, March 12th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); Medical Association of the Greater City of New York; Society of Medical Jurisprudence, New York; New York Medicohistorical Society (private); New York Ophthalmological Society (private); Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private); Corning, N. Y., Medical Association.

TUESDAY, March 13th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medi-

cine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, March 14th.—Medical Society of the Borough of the Bronx, New York; New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox Medical and Surgical Society (private).

THURSDAY, March 15th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of the City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, March 16th.—New York Academy of Medicine (Section in Orthopaedic Surgery); Manhattan Medical and Surgical Society, New York (private); New York East Side Physicians' Association; Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society.

PHILADELPHIA AND THE MIDDLE STATES

Municipal Hospital Census for January, 1906:

	Remaining last report.	Rec'd	Disch'd.	Died.	Rem'ng.
Diphtheria	81	116	78	37	82
Scarlet fever	95	94	49	3	137
Other diseases	1	0	0	0	1

The Medical Society of New Jersey will hold its annual meeting at Atlantic City on June 19 to 21, 1906.

The Hygiene of Milk.—A lecture on this subject, by Dr. William H. Park, of New York, was given at the Orange, N. J., Free Library, on the evening of Tuesday, March 6th.

The Wistar Institute of Anatomy has been designated by the Imperial Academy of Sciences of Vienna as a cooperative laboratory for the investigation of the human brain.

Medicochirurgical College of Philadelphia.—Judge Beiler has resigned as president of the board of trustees and Mr. William Clarke Mason has resigned from the board of trustees. Mr. G. C. Signor has been elected superintendent of the hospital.

The New Home for Nurses at the Kensington Hospital for Women, at 136 Diamond Street, was opened for inspection on Thursday, March 1st. A new operating room and a new sterilizing plant were opened for inspection at the same time.

The Austin Flint Medical Society, of Pittsburgh, Pa., held its annual meeting and banquet at the Fort Pitt Hotel, Pittsburgh, on Tuesday, February 27th. The officers of the society are: President, Dr. Robert E. Davison; vice-president, Dr. Robert J. McAdams; secretary and treasurer, Dr. Frank Kenworthy, all of Pittsburgh.

Northern Medical Association of Philadelphia.—At the annual business meeting the following officers were elected: President, Dr. Howard D. Geisler; vice-president, Dr. Samuel H. Brown; recording secretary, Dr. R. E. Shrone; treasurer, Dr. John W. Millick; corresponding secretary, Dr. Thomas R. Currie; censor, Dr. Thomas Shriner; librarian, Dr. Robert J. Hess.

Philadelphia Personal.—Dr. Richard H. Harte gave a dinner at his residence, 1503 Spruce Street, on the evening of March 3rd, in honor of Dr. Dudley P. Allen, of Cleveland, secretary of the American Surgical Association.

Dr. Lewellys F. Barker, professor of medicine in Johns Hopkins University, spoke before the James Tyson Medical Society of Undergraduates at the University of Pennsylvania, on February 28th, on Personal Observations of Bubonic Plague.

Charitable Bequests.—By the will of Michael Jennings, St. Vincent's Home, the Catholic Home for Destitute

Children, and the House of the Good Shepherd are each devised \$1,000. St. Agnes's Hospital receives \$500. By the will of Louisa Dieterich the Rush Hospital receives \$20,000. From this amount the Daniel P. Dieterich Free Bed and the Louisa Dieterich Free Bed are to be established.

Scientific Society Meetings in Philadelphia for the Week Ending March 17, 1906.—Monday, March 12th, Section in General Medicine, College of Physicians; Wills Hospital Ophthalmic Society. Tuesday, March 13th, Kensington Branch, Philadelphia County Medical Society; Philadelphia Paediatric Society; Botanical Section, Academy of Natural Sciences. Wednesday, March 14th, Philadelphia County Medical Society. Thursday, March 15th, Section in Gynecology, College of Physicians; Section Meeting, Franklin Institute. Friday, March 16th, University of Pennsylvania Medical Society; American Philosophical Society; West Philadelphia Branch, Philadelphia County Medical Society.

The Section in General Medicine of the College of Physicians of Philadelphia.—A meeting will be held on Monday evening, March 12th, with the following programme: Dr. David Riesman will report a Case of Scleroderma, and will exhibit the patient; Dr. William G. Spiller and Dr. J. C. Gittings will read a paper entitled Cervical Rib Associated with Cervicobulbar Palsy; Dr. Robert N. Willson will read a paper entitled Mercurial Nephritis, with the Report of a Fatal Case; Dr. M. Howard Fussell will report Two Cases of Aneurysm of the Aorta; Dr. J. Alison Scott will report a Case of Aneurysm of the Descending Thoracic Aorta; Dr. A. O. J. Kelly and Dr. R. L. Lavenson will report a Case of Aneurysm of the Aorta.

The American Hospital for Diseases of the Stomach, situated at Eighteenth and Wallace Streets, Philadelphia, has just issued its announcement. The medical staff is made up as follows: Chief physician, Dr. Lewis Brinton; chief surgeon, Dr. John B. Deaver; assistant surgeon, Dr. Ludwig Loeb; gynecologist, Dr. John B. Shober; paediatrist, Dr. Sherbourne W. Dougherty; assistant physician, Dr. I. R. Strawbridge; consulting physician, Dr. J. C. Wilson; consulting ophthalmologist, Dr. James Thornton; director of the research laboratory, Dr. L. Napoleon Boston. The objects of the institution are: (1) The employment of modern methods in the investigation and treatment of diseases of the digestive organs—stomach, intestines, liver, etc.—and other abdominal organs such as the kidney, etc.; also diseases of the blood; (2) to establish a well equipped laboratory for research work in the line of diseases of the digestive tract and for the study of metabolic processes in health and disease of the abdominal organs and of the blood; (3) to provide comfortable surroundings and proper food for the worthy poor afflicted with cancer, ulcer, appendicitis, and other acute and chronic ailments of the stomach and bowels.

Philadelphia Bureau of Health Statistics.—During January the division of medical inspection made 7,645 inspections, excluding schools; 1,809 fumigations were ordered; 48 cases were referred for special diagnosis; 6,454 visits were made to schools and 1,561 children were excluded from school; 288 cultures were taken, 144 injections of antitoxine were given, and 249 people were vaccinated. In the division of vital statistics 2,905 deaths, 4,974 births, and 1,910 marriages were reported. In the division of milk inspection 6,168 inspections were made of 130.891 quarts of milk, of which 293 quarts were condemned. Four chemical, 923 bacteriological, and 923 microscopical examinations were made. In the division of meat and cattle inspection 2,307 sanitary inspections were made, of which 5 were found unsanitary; 2,307 inspections of dressed meats were made, of which 47 were condemned; 70,007 stock yard inspections were made, of which 80 were condemned; 2,826 post mortem examinations were made, of which 72 were condemned. In the division of disinfection 270 fumigations were made for scarlet fever, 442 for diphtheria, 324 for typhoid fever, 219 for tuberculosis, and 1,191 for miscellaneous diseases. Sixty-five schools were fumigated. In the bacteriological laboratory 1,420 examinations were made of suspected diphtheria cultures, 699 examinations for the serum diagnosis of typhoid fever, 883 examinations of milk, 150 examinations of sputum, and 3,980,000 units of antitoxine were supplied. In the chemical laboratory 12 disinfection tests were made and 147 analyses completed.

The Health of Philadelphia. During the week ending February 24, 1906, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases	Deaths
Malarial fever	1	0
Typhoid fever	340	39
Scarlet fever	50	2
Chickenpox	31	0
Diphtheria	93	17
Cerebrospinal meningitis	1	0
Measles	685	16
Whooping cough	15	7
Tuberculosis of the lungs	114	57
Pneumonia	135	76
Erysipelas	11	0
Tetanus	1	0
Septicæmia	1	1
Cancer	10	30
Mumps	13	0

The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 13; puerperal fever, 1; dysentery, 3; diarrhoea and enteritis, under 2 years of age, 24. The total deaths were 617, in an estimated population of 1,469,126, corresponding to an annual death rate of 21.84 in 1,000 population. The total infant mortality was 147; under 1 year of age, 104; between 1 and 2 years of age, 43. There were 36 still births, 25 males and 11 females. The temperatures were moderate.

BOSTON AND NEW ENGLAND

The Portland (Me.) Medical Club met on Thursday evening, March 1st, at the Columbia Hotel. The paper of the evening was by Dr. C. O. Caswell on The Medical Inspection of Schools.

Proposed Legislation Concerning Objectionable Advertisements.—A bill to prohibit advertisements referring to diseases peculiar to either sex, is now up for consideration before the Massachusetts legislature. A public hearing was appointed for March 6th at the State House.

The Boston Medical Library Society.—At a meeting of this society, in conjunction with the Suffolk District Branch of the Massachusetts Medical Society, held at the library, on Wednesday, February 28th, Dr. Richard C. Cabot in the chair, Professor W. T. Porter read a paper on The Physiology of the Circulation, and Professor W. B. Cannon read a paper on Recent Advances in the Physiology of the Gastrointestinal System and Their Bearing on Medicine.

The Mortality of Boston.—The number of deaths reported to the Board of Health for the week ending February 24th, was 261, as against 217 the corresponding week last year, showing an increase of 44 deaths, and making the death rate for the week 22.87. The number of cases and deaths from infectious diseases was as follows: Diphtheria, 59 cases, 6 deaths; scarlatina, 13 cases, no deaths; typhoid fever, 6 cases, no deaths; measles, 191 cases, 2 deaths; tuberculosis, 45 cases, 34 deaths. The deaths from pneumonia were 50, whooping cough 3, heart disease 26, bronchitis 7, marasmus 5. There were 11 deaths from violent causes. The number of children who died under one year of age was 41, under five years of age 63, persons over sixty years of age 63, deaths in public institutions 72.

BALTIMORE AND THE SOUTH.

The Miami (Kas.) County Medical Society was organized recently at Paola with the following officers: President, Dr. L. L. Uhls, of Osawatimie; vice-president, Dr. J. H. Haldeman, of Paola; treasurer, Dr. J. D. Walthall, of Paola. Dr. Haldeman was appointed delegate for two years to the Kansas Medical Society.

The Memphis and Shelby (Tenn.) County Medical Society.—At the regular monthly meeting, held at Memphis on Tuesday, February 20th, the discussion and papers were on subjects of special interest to eye, ear, and throat specialists. Dr. E. C. Ellett presented specimens and reported cases. Dr. G. H. Savage read a paper on Pterygium: Its Relation to the Refraction of the Eye.

The Tri-State Medical Association of Virginia and the Carolinas.—At the annual meeting, held at White Stone Springs, Spartanburg, S. C., on February 27 and 28, 1906, the election of officers resulted as follows: President, Dr. R. E. Hughes, of Laurens, S. C.; vice-presidents, Dr. I. M. Kyler, of Morganton, N. C.; Dr. J. Adam Hayne, of Greenville, S. C.; and Dr. W. E. Driver, of Richmond, Va.; secretary and treasurer, Dr. Howell Brooks, of Waynesville,

N. C.; executive committee, Dr. B. K. Hayes, of North Carolina; Dr. C. B. Earle, of South Carolina; and Dr. J. Shelton Horsley, of Virginia.

The Virginia State Board of Medical Examiners.—Governor Swanson has announced the appointment of the following as the medical examining board of Virginia for four years, beginning April 1, 1906: First District, Dr. W. B. Robinson, Tappahannock, Va.; Second District, Dr. H. M. Nash, Norfolk; Third District, Dr. J. E. Warrinner, Brook Hill; Fourth District, Dr. W. W. Wilkinson, La Crosse; Fifth District, Dr. R. S. Martin, Stuart; Sixth District, Dr. Samuel Line, Lynchburg; Seventh District, Dr. Robert Randolph, Boyce; Eighth District, Dr. R. M. Slaughter, Theological Seminary; Ninth District, Dr. E. T. Brady, Abingdon; Tenth District, Dr. C. W. Rodgers, Staunton; State at large—Dr. R. W. Martin, Lynchburg; Dr. A. S. Priddy, Bristol; Dr. R. B. James, Danville. Dr. Garland P. Moore, of Northampton County, has been named by the Executive as surgeon on his staff and has accepted.

The Mortality of Baltimore in February, 1906.—The report of the health commissioner for the month of February shows that there were 890 deaths in Baltimore during the month, compared with 883 for the corresponding period of 1905, 1,024 for 1904, and 862 for the same month of 1903. The deaths comprised 334 white males, 320 white females, 111 colored males, and 125 colored females. There were 282 deaths of children under five years of age, being 31.69 per cent. of the whole number of deaths for the month. There were 859 births reported during the month, comprising 344 white males, 326 white females, 86 colored males and 103 colored females. The following infectious and contagious diseases were reported during the month, as compared with the corresponding month last year:

	1905.	1906.
Smallpox	0	19
Diphtheria and pseudodiphtheria	80	68
Scarlet fever	54	47
Typhoid fever	16	31
Measles	80	14
Mumps	7	3
Whooping cough	0	20
Variola (chickenpox)	25	20
Tuberculosis	41	52
Total	303	317

The following were the principal causes of death last month:

	1905.	1906.
Typhoid fever	7	6
Malarial fever	0	2
Smallpox	0	0
Measles	0	1
Scarlet fever	1	2
Whooping cough	2	23
Diphtheria and pseudodiphtheria	2	6
Influenza (all ages)	22	10
Dysentery	0	1
Erysipelas	2	1
Septicæmia	1	7
Tuberculosis (all ages)	83	119
Other infectious diseases	16	28
Cancers	29	19
Congestion of brain	13	28
Tetanus	1	1
Heart disease	62	82
Bronchitis	24	26
Pneumonia	118	177
Diarrhoea and enteritis (all ages)	5	6
Diarrhoea and enteritis (under five years of age)	6	3
Bright's disease	64	68
Puerperal septicæmia	4	4
Old age	16	8
Self-destruction	9	7
Accidents	40	30
Unlabeled	1	1

CHICAGO AND THE WEST.

The Floyd County (Ind.) Medical Society.—At a meeting held at New Albany on Thursday, March 1st, the following officers were elected for the ensuing year: President, Dr. G. H. Cannon; vice-president, Dr. W. J. Leach; secretary and treasurer, Dr. Dumont Garey; delegate to the State Medical Society, Dr. E. P. Easley; alternate, Dr. John F. Weathers.

The Union Medical Association of Northeast Ohio (the Sixth Councillor District Medical Society of Ohio).—The annual meeting was held at Akron on Tuesday, February 15th. The election of officers resulted as follows: President, Dr. A. B. Walker, of Canton; secretary, Dr. J. H. Seiler, of Akron; treasurer, Dr. H. H. Jacobs, of Akron; councillor, Dr. T. Clarke Miller, of Massillon. The next

meeting of the society will be held at Orrville in August, 1906.

The Hempstead Academy of Medicine at Portsmouth, Ohio.—The following are the newly elected officers of the academy: President, Dr. P. J. Klines; vice-president, Dr. D. A. Berndt; secretary, Dr. J. L. Jordan; treasurer, Dr. S. S. Halderman; censor, Dr. J. S. Rardin. The academy owns a library consisting of about a thousand volumes of medical books, which are being recatalogued and placed in the new Carnegie library building under the care of the city librarian. New works of reference will be added from time to time and the library kept up to date. It will thus be available to the members and will aid them greatly in their work. Meetings are held on the second Monday of each month and reputable practitioners are always welcome. Dr. G. A. Sulzer will read a paper at the next meeting on Monday, March 12th, on the subject: Illustrations of the Difficulties in Diagnosis in Eye Diseases.

Statement of Mortality in Chicago for the Week Ending February 24, 1906, compared with the preceding week, and with the corresponding week of 1905. Death rates computed on United States Census Bureau's midyear populations—2,049,185 for 1906, and 1,990,750 for 1905:

	Feb. 24, 1906.	Feb. 27, 1906.	Feb. 18, 1905.
Total deaths, all causes.....	594	527	637
Annual death rate in 1,000.....	15.10	13.41	16.73
Sexes—			
Males	326	301	377
Females	268	226	260
Ages—			
Under 1 year of age.....	136	108	168
Between 1 and 5 years of age.....	41	40	75
Between 5 and 20 years of age.....	41	35	38
Between 20 and 60 years of age.....	252	243	234
Over 60 years.....	124	101	122
Important causes of death—			
Apoplexy	13	18	14
Bright's disease.....	49	29	28
Bronchitis	19	11	41
Consumption	52	72	71
Cancer	31	23	23
Convulsions	12	15	19
Diphtheria	9	10	8
Heart diseases.....	44	49	36
Influenza	3	2	10
Intestinal diseases, acute.....	30	29	30
Measles	4	0	3
Nervous diseases.....	31	26	31
Pneumonia	108	80	135
Scarlet fever.....	5	13	0
Smallpox	0	0	2
Suicide	5	10	4
Typhoid fever.....	1	4	6
Violence (other than suicide).....	39	27	18
Whooping cough.....	1	2	7
All other causes.....	138	107	151

Public health conditions remain satisfactory at the close of the week, although there were 67 more deaths reported than during the week previous. The rate for the month, to the 24th, inclusive, is 14.25 in 1,000 of the population, or a fraction more than 14 per cent. less than the average February rate of the decade 1896-1905. Reports to the division of contagious diseases show decreases in all except typhoid fever, which remains the same as during the previous week. The hospital population also shows a slight decrease, except of pneumonia cases. The total of all cases at the close of the week was 2,018, including 29 cases of typhoid and 32 cases of pneumonia. At the close of the previous week the total was 2,050, including 34 cases of typhoid and 20 cases of pneumonia. For the second time in the record of the department only one death from typhoid fever was reported in a population of over 2,000,000.

GENERAL.

The Berlin Postgraduate Medical School, known as the Kaiserin Friedrich Haus, was opened by the Emperor and the Empress on March 1st. It was officially recognized by the Centralcomité that the New York Postgraduate School had served as a model in many respects, and Dr. D. B. St. John Roosa and Dr. Carl Beck were invited as honorary guests.

Honor to Professor von Bergmann.—The German Emperor has appointed Professor Ernst von Bergmann, the gifted author of von Bergmann's *Surgery*, recently published by Lea Brothers & Co., to membership in the upper house of parliament for life. *Science* adds that this is the first time in history that such an honor has been conferred on the medical profession in Germany.

The German Röntgen Society.—In connection with the date set for the meeting of the second congress of the Ger-

man Röntgen Society the fact was unfortunately overlooked that April 8th, the date set for the meeting, happens to fall this year in Holy week, and notice has therefore been published that the congress will meet on the 1st and 2nd of April, instead of on the 8th and 9th, as originally announced. The meeting will take place in Langenbeckhaus, Berlin. Further details may be obtained from the secretary, Dr. Immelman, Lützowstrasse 72, Berlin N. W. 35.

A Proposed Monument to Dr. Mikulicz.—An international committee has been formed, to solicit and receive contributions for a monument in honor of the late distinguished surgeon, Johannes von Mikulicz-Radecki, of Breslau, Germany. The undersigned, having been requested to serve on this committee, appeal to the surgeons of the United States and Canada for subscriptions to the fund. An opportunity is afforded not merely to testify to our esteem and affection for Professor von Mikulicz, whose memory is cherished by every surgeon of the land, but also to express our appreciation of Germany's splendid achievements in surgery and manifest our desire to strengthen the cordial relations existing between the men of science of the two countries. Contributions may be sent to any member of the committee.

(Signed.) W. W. KEEN (Philadelphia),
W. S. HALSTED (Baltimore),
J. B. MURPHY (Chicago),
F. KAMMERER (New York).

The Association of American Medical Colleges.—The sixteenth annual meeting will be held at Pittsburg, Pa., on Monday, March 19, 1906. The forthcoming annual meeting of the association will be an important one, and it is particularly desirable that every college holding membership in the association be represented, either by its dean (the accredited representative) or some member of the faculty. Prominent educators and officials of State examining boards have been invited to attend this meeting. Several have accepted already, and it is hoped that all will be present, because their counsel and advice are needed. The subjects to come up for discussion have not yet been decided on positively, but it is probable that besides the question of the evaluation of college work, the future relation of this association and State examining boards, how this association can assist the boards, and uniformity in medical education, will be matters that will come up for discussion. Hence a full attendance is necessary. The first session will be called to order promptly at 10 a. m.

The American Laryngological, Rhinological, and Otolological Society will hold its twelfth annual meeting, under the presidency of Dr. James E. Logan, at Kansas City, Mo., on June 11, 12, and 13, 1906. The council of the society calls attention to prizes that have been offered by the following named members: Dr. J. E. Sheppard, topic: The Best Classification of Nonsuppurative Affections of the Middle Ear, the same to be based so far as possible on pathological research, prize, \$100.00; Dr. D. Braden Kyle, topic: Atrophic Rhinitis, prize, \$100.00; Dr. Charles W. Richardson, topic: What Operative Treatment Offers the Best Results for the Cure of Chronic Suppurative Frontal Sinusitis, prize, \$100.00; Dr. Norval H. Pierce, topic: Original Work on Rarification of the Labyrinthine Capsule, prize, \$100.00; Dr. Edward B. Dench, topic: Chronic Nonsuppurative Inflammation of the Middle Ear, prize, \$100.00. The above named prizes may be competed for by members of the society only, and competitors are requested to present their papers to the secretary, Dr. Wendell C. Phillips, 40 West Forty-seventh Street, New York, before April 15, 1906. The successful paper for each prize will be read at the annual meeting. Competitors are requested not to sign papers, but to enclose name in a sealed envelope. The council further announces that the society holds for the encouragement of research a fund of \$500.00, the whole or a portion of which may be awarded at the discretion of the council to any of the society's members presenting an essay embodying original work in subjects pertaining to laryngology, rhinology, or otology. The council reserves the right to make no award, if in its opinion the essays are of insufficient merit. All essays submitted must be anonymous, being designated by a motto or device, the writer's name and address accompanying the essay in a sealed envelope, inscribed with the same device or motto as the essay. It is hoped that many members of the society will enter into active competition both for the prizes and for the original research fund.

Pith of Current Literature.

AMERICAN MEDICINE.

March 3, 1906.

1. The Public Health Laboratory: Its Function and Relation to General Medicine and Modern Social and Industrial Activity, By F. F. WESBROOK.
2. Cause of Epilepsy, By OTTO LERCH.
3. Chronic Urethritis and an Improved Method of Applying Medication to the Urethra, By EDGAR G. BALLENGER.
4. The Practical Side of Mosquito Extermination, By HENRY CLAY WEEKS.
5. The Effect of Posture on Cardiac and Vascular Murmurs, By ROBERT DAWSON RUDOLF.
6. Disinfection of Ships, By J. D. LONG.

1. **The Public Health Laboratory: Its Function and Relation to General Medicine and Modern Social and Industrial Activity.**—Wesbrook thinks that the problems studied and the work done by such laboratories should be limited to matters of public import where the information yielded will be fully utilized in the protection of the public. The laboratory should, therefore, constitute a part of the general public health machinery.

2. **Cause of Epilepsy.**—Lerch is of the opinion that the basis of epilepsy is a diseased brain, congenital or acquired. The many theories that have been advanced do not satisfactorily explain. So the theory that the disease is due to autointoxication, or the one that epilepsy is due to a permanent abnormal condition of the cerebral cortex.

3. **Chronic Urethritis and an Improved Method of Applying Medication to the Urethra.**—Ballenger says the worst complication that is likely to follow a chronic urethritis is a stricture, consequently this should be borne in mind during the entire treatment. The pathology is essentially a chronic inflammation of the sub-epithelial tissue (and especially around the follicles) which passes through two stages, that of infiltration and that of contraction. The most rational method of forestalling a stricture is by the treatment of these conditions with the medicated sounds. No other single treatment combines so many beneficial factors, i. e., dilation, cold, massage, and medication uniformly applied to the entire membrane and depressions.

THE BOSTON MEDICAL AND SURGICAL JOURNAL

March 1, 1906.

1. The Medical Profession and the Medical Journals in Relation to Nostrums, By FRANK BILLINGS.
2. Ready Made Remedies, By FRANK G. WHEATLEY.
3. Photophobia: A Nasal Reflex, By EDMUND D. SPEAR.
4. Amaurotic Family Idiocy: A Report of Four Cases, By ALEXANDER QUACKENBOSCH.

1. **The Medical Profession and the Medical Journals in Relation to Nostrums.**—Billings states that primarily the medical profession is to blame for the present extensive use of proprietary medicines, the majority of which are nostrums. The law of demand and supply applies here; if we did not prescribe them, they would not be manufactured. A large number of the medical profession do not practice medicine rationally. They have no clear conception of disease processes. They do not study and examine their patients. No diagnosis is made at all or only from subjective conditions. Symptoms, not conditions, are treated. Headache, backache, indigestion, albuminuria, cough, constipation, dysmenorrhœa, insomnia, nausea, dyspnœa, etc., call for drugs with usually no attempt to get at the underlying cause. This sort of practice requires a vast number of these nostrums. The physician relies upon ready made, symptom indicated, dose directed, usually palatable medicine. The nomenclature given to these medicines does not signify anything, it is meaningless, and is very often accompanied by misleading state-

ments of praise and results received from the use of these compounds. The medical schools should teach the student more fully and adequately botany, pharmacology, and therapeutics. The medical graduate must know how to observe and interpret the phenomena of disease, and he must know with what and how to combat them; he should, therefore, know pharmacology and prescription writing.

2. **Ready Made Remedies.**—Wheatley thinks that the average physician of to-day does not know enough about the science and art of prescription writing. The medical profession, following the ruling ideas of their authorities, has placed too much emphasis upon the importance of hygienic surrounding, proper diet, etc., and looked upon drug treatment as something of very little moment.

3. **Photophobia: A Nasal Reflex.**—Spear cites a case from which he draws the inference, that when light causes sneezing there must be a degree of hypersensitiveness of the nasal membranes, and that when light causes one to blink or wrinkle one's forehead the nose is at fault rather than the eyes themselves. Certainly, the author adds, many individuals contract the palpebral fissures in order to obtain clearness of vision.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 3, 1906.

1. New Technics for Breast Amputation, By JABEZ N. JACKSON.
2. Requirements for a Successful Career in Surgery, By LEWIS C. BOSHER.
3. A Criticism of Some of the Theories Regarding the Ætiology of Goundon and Ainhum, By F. C. WELLMAN.
4. Tuberculosis and Patent Medicine, By G. R. POGUE.
5. Surgical Repair of Injured Nerves, By J. SHELTON HORSLEY.
6. Drug Addictions. Preliminary Report of the Committee in Section on Nervous and Mental Diseases, By SMITH ELY JELLIFFE.
7. Acute Articular Rheumatism, By C. W. HARGENS.
8. Spinal Anæsthesia by Magnesium Sulphate. A Report of Seven Operations Performed Under Its Influence, By H. A. HAUBOLD and S. J. MELTZER.

1. **New Technics for Breast Amputation.**—Jackson describes a new method for operation of carcinoma of the breast. He believes that his technics has the following advantages: 1. The flap forms a covering for the chest defect, as a rule without any grafting. Of course this implies that there has been no very extensive ulceration or other cause preventing the making of a healthy flap. 2. The drawing of the skin up to the arm does away with the axillary fossa, and thus with the large space to be obliterated by scar tissue with consequent pressure on the axillary vessels and nerves. 3. The ligation of all vessels at their nearest point of origin does away with the use of a large number of hæmostatic forceps, saving time and avoiding the inconvenience of having them in the way. He has never used more than a dozen forceps, and usually about six, and the operation has taken only from forty minutes to one hour for its performance, never over an hour even when working slowly. 4. The absence of hæmorrhage, so that it can almost be called a bloodless operation. 5. The entire technical portion of the operation is completed before the chest is exposed by the removal of the breast, therefore, long exposure of an enormous area of raw chest surface with its attendant shock is avoided. As soon as the breast is removed, the wound is ready to be closed.

3. **A Criticism of Some of the Theories Regarding the Ætiology of Goundon and Ainhum.**—Wellman rejects all the theories that have been advanced of the ætiology of goundon, that it is due to syphilis, yaws, atavism, bony malformations, or larvæ, all of which, he says, are based only on conjecture. The tumors are doubtless a hyperplasia, probably due to an osteoplastic periostitis with a very definite cause not yet demon-

strated. As regards ainhum, the author says that no definite and undisputed cause for the lesion has yet been proved, but he thinks that there is most to be said in favor of da Silva Lima's view that it is due to traumatism. The splay footed negro is especially liable to such, and the groove around the toe in this disease, both macroscopically and histologically, is a cicatrix. The later fatty and atrophic conditions in the amputated toe are not yet fully explained, but may depend on local cicatricial formations or may be of trophic origin.

4. **Tuberculosis and Patent Medicines.**—Pogue is of the opinion that our therapeutical nihilism and teachings that only outdoor treatment is effective for tuberculosis has made many sufferers to try nostrums and become a revenue of the patent medicine and advertising quacks, who promise sure cures. Our sanatoria can only receive a small percentage of the tuberculous, the rest are forced to apply for other healing agents. The laity should be properly educated.

5. **Surgical Repair of Injured Nerves.**—Horsley states that the surgical methods of repairing nerve defects may be classed as: 1, Simple suture; 2, flap operation; 3, nerve bridging; and 4, nerve implantation and anastomosis. He then recites a case coming under the fourth head. This patient, besides other injuries, received a complete paralysis of sensation and motion in all the forearm and hand muscles except those supplied by the ulnar and muscular cutaneous nerves. Two operations were performed in the upper arm, with an interval of more than a year between them.

6. **Drug Addictions. Preliminary Report of the Committee in Section on Nervous and Mental Diseases.**—Jelliffe, as chairman of a committee, makes a report in which he says that as the drug addictions are too extensive a subject for consideration at the present time, the committee has limited its labor to the subject of opium. The author then makes the following suggestions, formulated by the committee: 1. The distribution and spread of the habit. Valuable data referring to this point can be obtained through the pharmacists, prison and asylum physicians, and through the cures advertised in the daily press. 2. The various forms of its use. 3. The origins of the habit. 4. A physiological study of the euphoria of opium. 5. Investigation into the pharmacology of opium. 6. The treatment, social and individual. These six points may be studied by the physicians as a basis for further investigations.

7. **Acute Articular Rheumatism.**—Hargens suggests the following treatment: Rest in bed, with dry woollen blankets and hot fomentations. Withdrawal of food until the alimentary canal has been thoroughly cleansed, than in the several stages, first milk diet, later fish, oysters, and the white meat of domestic fowls with easily digested green vegetables. Tub baths with gradually increasing temperature of the water from 98° to 102°. Of drugs, he is in favor of the salicylates, syrup of iodid, and Fowler's solution.

8. **Spinal Anæsthesia by Magnesium Sulphate.**—Haubold and Meltzer add a new report to the investigations of Auer and Meltzer on magnesium sulphate as an anæsthetic. A small dose of chloroform should be administered to divert the patient's attention and to hasten and complete the anæsthesia. The dose of the magnesium sulphate varies, the smallest administered was one c.c. of the twenty-five per cent. solution to twenty-five pounds body weight, while the largest was eighteen c.c. After injection about two hours should be waited until the operation commences. After operation the spinal canal should be washed.

MEDICAL RECORD.

March 3, 1906.

1. Epidemic Cerebrospinal Meningitis. Clinical Report and Analysis of Special Symptoms in Thirty Cases,

with Remarks on the Treatment,

By WILLIAM M. LESZYNSKY.

2. The Heart in Tuberculosis. By WOODS HUTCHINSON.
3. Massage and Motion in Fractures, By GUSTAF NORSTRÖM.
4. Syphilitic Empyema of the Accessory Sinuses of the Nose, with a Report of Four Cases, By JOSEPH H. ABRAHAM.
5. Splenic Leucæmia, By H. J. THOMPSON.
6. Aspiration of the Tympanic Cavity After Paracentesis: A Valuable Aid in the Treatment of Acute Otitis Media, By PERCY FRIEDENBERG.

1. **Epidemic Cerebrospinal Meningitis.**—Leszynsky writes that good nursing and proper feeding are the most important feature in the treatment of cerebrospinal meningitis. When the weather permits, the patient should be kept in the open air the greater part of the day. He doubts the utility of the ice bag applied to the head and neck, while hot saline rectal irrigation or hypodermoclysis often proves extremely valuable in improving the vitality. The hot bath at a temperature of 105° for fifteen or twenty minutes given several times a day usually quiets excessive irritability and delirium, and temporarily improves the patient's general condition. Whiskey, strychnine, digitalis, etc., should be given when indicated; morphine will relieve pain, but still much better is ergot. Lumbar puncture should be performed as well for diagnostic as therapeutical purposes. The author treated in this manner thirty cases, with fifty per cent. of recovery.

2. **The Heart in Tuberculosis.**—Hutchinson draws the attention to the following facts which may be used as a basis for further investigations: A weak, undersized muscularly deficient heart, indicated by weak, rapid pulse and defective first sound, approaching embryocardia, is one of the most constant and significant conditions present in consumption. This condition of the heart in a considerable percentage of cases precedes the development of tuberculosis. In tuberculosis, as in pneumonia and typhoid, while the chief seat of toxine production is in the lungs or bowels, the chief strain falls upon the heart, and death in the majority of cases is due to toxic heart failure. This condition of the heart should be the principal guide in the diagnosis, prognosis, and treatment of consumption. A persistently rapid pulse without other ascertainable cause should always rouse suspicion of incipient tuberculosis.

3. **Massage and Motion in Fractures.**—Norström does not think that it is possible to formulate rules as regards methodical application of massage and passive movements which might serve as a rule to all practitioners, to be followed by them. Each case should be judged on its own merits, but in the majority of cases of simple fracture massage is useful in two stages: 1. At the beginning, because it favors the absorption of sanguineous and serous effusions and diminishes tumefaction and local tenderness. 2. After the removal of an apparatus, if such has been used. It is only through massage, says the author, that functional weakness, resulting from atrophy of muscles, and induration or retractions of the callus, can be overcome.

4. **Syphilitic Empyema of the Accessory Sinuses of the Nose, with a Report of Four Cases.**—Abraham says that no syphilitic patient is free from the possibility of tertiary manifestation, in one form or another, even after a thorough course of antisiphilitic treatment, lasting two years or more; therefore, all such patients should be advised to consult their physicians every one to three years subsequent to their treatment. Syphilitic empyema of the sinus of Highmore can be easily diagnosed with the aspirating needle, especially devised by the author. The treatment of the accessory sinuses quickly responds to specific treatment, as the administration of iodides, and conservative surgery such as removal of necrosed bone

and granulation tissue, with a nasal bone forceps, curettes, and snares.

6. Aspiration of the Tympanic Cavity After Paracentesis.—Friedenberg describes his method of aspiration. He uses a small glass bulb, about five eighths of an inch wide, shaped like an olive with a very blunt tip. The neck of the bulb is stopped with sterile cotton and attached to a short rubber tube. Immediately after the paracentesis has been made the glass bulb is pressed against the external meatus, plugging the canal hermetically. Suction is then applied. The author had very good results with his method.

BRITISH MEDICAL JOURNAL

February 17, 1906.

1. The Relation of the Medical Profession to War,
By A. H. KEOGH.
2. Clinical Remarks on a Case of Tuberculosis Disease of the Lungs and Larynx, Showing the Need for the Compulsory Notification of Phthisis,
By B. BEAMWELL.
3. Clinical Observations on Some Acute Abdominal Disorders, Which Resemble in Their Symptoms Acute Intestinal Obstruction,
By G. HEATON.
4. Stagnation of Food in the Stomach,
By A. MCPHEDRAN.
5. A Review of a Series of Operations for Cancer of the Stomach,
By B. G. A. MOYNIHAN.
6. On the Treatment of Perforating Typhoid Ulcers,
By F. L. A. GREAVES.
7. Notes on the Treatment of Diphtheria,
By T. B. RHODES.

3. Acute Abdominal Disorders.—Heaton discusses certain abdominal disorders which simulate acute intestinal obstruction. The typical cardinal symptoms of the latter condition may be summed up as follows: 1. Sudden violent abdominal pain usually at the umbilicus or in the epigastrium. This pain is usually colicky in character, subject to violent exacerbation, and is sometimes relieved by pressure. 2. Collapse accompanies the onset of the pain with pallor of the face and extremities and a small thready pulse. 3. Vomiting occurs, first of all of the contents of the stomach, and then as the case proceeds the vomited matter becomes more and more stercoraceous in character. 4. Absolute constipation. 5. A subnormal temperature is usually present throughout unless peritonitis supervenes. The abdomen is as a rule soft and flaccid at the beginning, but becomes distended and tympanitic as the case proceeds. The patient becomes worse, the pulse begins to fail, increasing in frequency and diminishing in volume until death occurs from asthenia and septic poisoning, consciousness being retained until the last. The disorders most closely simulating the above condition, are as follows: 1. Biliary or renal colic. Here there is a history of previous attacks, accompanied by jaundice or hæmaturia, but the pain is not so general. 2. Perforation of gastric or duodenal ulcer. The collapse is usually extreme, and there is a sense of something having given way, and frequently a burning pain in the epigastrium. The temperature rises and the pulse is increased in frequency. Vomiting is not a prominent symptom; it takes place without nausea, and the vomitus is rarely stercoraceous. 3. Gangrenous appendicitis or the rupture of an appendiceal abscess. Here the symptoms may correspond exactly with those of perforation as detailed. But actual sudden perforation of an appendix rarely occurs without warning. 4. Tuberculous peritonitis. There is a family history of tuberculosis, and the child has usually bad diarrhoea. 5. Acute hæmorrhagic pancreatitis. The patients are usually middle aged stout men, often with a history of intemperance or of gallstones. The onset is sudden and there is intense epigastric pain. Vomiting may be marked. The prognosis is of the gloomiest character. 6. Torsion of an undescended testicle or rotation of an ovarian cyst. 7. Rupture of an ectopic

gestation sac. 8. Embolism or thrombosis of the superior mesenteric vessels. The patients are usually men.

4. Gastric Stasis.—McPhedran states that the time usually required for the chymification of an ordinary dinner and its discharge into the duodenum is six hours, and never more than seven. The retention of food in the stomach beyond that time shows that either or both of two conditions exist: (1) Deficiency in the expelling power of the stomach; (2) abnormal difficulty in the passage of food through the pylorus. Actual weakness of the muscular wall of the stomach is of very frequent occurrence, following acute illness, anemia, fatigue, etc. The most frequent cause of relative deficiency is the overloading of the stomach with unsuitable and ill prepared food.

6. Perforating Typhoid Ulcer.—Greaves reports two cases of perforating typhoid ulcers, operated upon by him. One case died of bronchopneumonia twenty-three days after the operation; the other recovered completely. A perforation occurring early in the disease, necessitates a guarded prognosis, owing to the complication of the abdominal section with the natural course of the fever. A perforation occurring in a true relapse, by which is indicated a fresh invasion of the typhoid bacillus, is very grave; but a perforation, occurring in what may be called the convalescent period, is much more favorable.

7. Treatment of Diphtheria.—Rhodes summarizes his views as follows: 1. The very slightest excuse should be sufficient for the diagnosis of diphtheria in a child; even so slight a sign as dryness or a parched appearance of the external nares in a child not well is sufficient to indicate that in most cases the manufacture of diphtheria toxins is going on, probably in the nasopharynx. 2. Diphtheria antitoxine never does any harm to a child, but rather it will assist in curing illness due to something wrong in the throat or nasopharynx in many cases. 3. Supposing the case to be one of diphtheria, as proved subsequently by the appearance of obvious signs and symptoms, the time lost by delay in giving the antitoxine is often sufficient to render the chance of recovery very small. 4. Though many experienced workers in the field of infectious diseases insist that very large doses are much more efficacious than small ones, sufficient stress is not laid on the fact that small doses, even though given late in the disease, will often just turn the scale in favor of the patient or at least assist the patient to fight the disease and hold it in check until arrival at the hospital, where more antitoxine may be given. 5. If every general practitioner would carry a syringe and one vial of antitoxine, much more antitoxine would be given before the child is removed to the hospital. At present there is often great delay and difficulty in obtaining antitoxine, especially in country districts.

LANCET.

February 17, 1906.

1. Appendicostomy and Its Possibilities,
By Sir W. H. BENNETT.
2. The Physical Anthropology and Ethnology of British New Guinea. Hunterian Lectures I and II,
By C. G. SELIGMANN.
3. The "Acute Abdomen." Lecture III,
By W. H. BATTLE.
4. A Large Teratoma of the Neck Successfully Removed from an Infant Three Weeks Old, with a Pathological Report,
By A. N. MCGREGOR and C. WORKMAN.
5. A Case of Persistent Aberrant Thymus,
By E. W. SHARP.
6. A Saccular Dilatation of the Small Intestine,
By E. CANTLEY.
7. Pneumothorax Due to Muscular Exertion in a Healthy Lad,
By W. G. NASH.
8. Cases of Stomatitis and Tonsillitis in Which Vincent's Spirochæta and Bacillus Were Present,
By W. H. HARWOOD-YARRED and P. N. PANTON.

9. Notes on a Case of Addison's Disease, Rapidly Fatal, with Symptoms of Acute Toxæmia, By H. C. LECKY.
10. A Method of Removing Carcinoma of the Ascending Colon, By F. D. BIRD.
11. Malta Fever in India. Isolation of the Micrococcus Melitensis From the Milk of a Domestic Goat in the Punjab, By W. H. C. FORSTER.
12. On Physical Training in Schools, By W. P. HERRINGHAM.

1. **Appendicostomy.**—Bennett reports a case of ulcerative colitis treated by irrigation of the large intestine through the appendix which was brought to the surface of the abdomen, fixed there, and opened—the operation being termed appendicostomy. The operation is a very simple one and no disadvantage or discomfort follows its performance. A full size soft rubber catheter passes down the appendix into the cæcum without the patient being conscious of its presence; no regurgitation or moisture comes from the stump. The sphincter at the cæcal end of the appendix grasps the catheter firmly and closes completely after its withdrawal. The adventitious opening can be closed with ease and certainty after it has ceased to be of use. The possibilities of the operation may be considered under four heads: 1. As a means for the treatment of certain conditions of the large and small intestine, such as mucous colitis, dysentery, chronic constipation, ileo-cæcal intussusception, and ulceration of the colon, syphilitic, and otherwise. 2. As a means of treatment of certain forms of intestinal distention, occasionally met with after abdominal operations in very toxic cases and in connection with some acute diseases, *e. g.*, pneumonia, which drugs seem powerless to affect, the distention being apparently due to toxic paresis. 3. As a means of administering nourishment and an alternative to the rectum for that purpose. Rectal feeding is not infrequently painful and, in sensitive patients, repulsive. Further, the higher up in the bowel an instrument is introduced the greater is the proportion absorbed for purposes of nourishment. 4. As a substitute for cæcal colotomy.

3. **The "Acute Abdomen."**—Battle, in his third lecture on acute inflammatory conditions of the abdomen, considers stercoral ulcers and intestinal complications of chronic intestinal obstruction. Stercoral ulcer is one of the most serious complications of chronic intestinal obstruction, even when the peritonitis produced is local in its character. In any adult with a history of chronic constipation who gives an account of a more recent attack of pain, usually in the right side of the abdomen, which has been followed by a rise of temperature, examination should be made for the signs of localized extravasation of fæcal matter into the peritonæum. If there is an ill defined area of dulness in the cæcal region, with tenderness and a sense of resistance, whilst rectal examination shows thickening on the right side of the pelvis, this complication should be suspected. Fluctuation may be present at a later stage. Stercoral ulcer giving rise to a localized extravasation and abscess is especially met with in elderly females who give a history of chronic constipation, recently more obstinate. The contents of the abscess cavity are most offensive. The prognosis is bad; if an artificial anus forms it is not conveniently situated.

7. **Pneumothorax.**—Nash reports a case of pneumothorax occurring in a strong athletic boy, aged eighteen, during a game of football. After running with the ball and kicking it, he stopped and stooped over to pull up his stocking, when he was seized with severe pain in the right side of the chest, and marked dyspnoea. On the fourth day after the onset, all typical signs of pneumothorax were present, bulging and loss of movement on the right side, displacement of the heart's apex to the left of the left nipple, obliteration of the liver dullness which gradually diminished until it entirely disappeared, hyperresonance on percussion, absence of nor-

mal breath sounds, amphoric breathing, and the bell sound. After aspiration of the air the patient recovered entirely. Simple pneumothorax from muscular effort is very rare. There was absolutely no evidence of tuberculosis; the evidence rather pointed to a superficial rupture of the lung near its lower anterior margin.

8. **Vincent's Bacteria in Stomatitis.**—Harwood-Yarred and Panton found the peculiar spirochæta and bacillus, known to be associated with Vincent's angina, in eleven cases of stomatitis and tonsillitis. Eight of the cases occurred in children under seven years of age. In all the onset was insidious, and characterized by headache, furred tongue, general malaise, and a sore throat. In all the breath was offensive. The tonsils were affected in four cases, they being covered with a grayish white membrane, removal of which caused bleeding. In the other cases the appearances presented were those of an ulcerative stomatitis. In all carious teeth were present in the mouth, and it was apparently round these that the disease had arisen. In five of the seven there was a grayish white necrotic patch on the cheek opposite the carious tooth. In ten of the eleven cases both the spirilla and the fusiform bacilli were present; in one the fusiform bacilli only. Attempts to cultivate the organisms uniformly failed.

PRESSE MEDICALE.

February 3, 1906.

1. Obliterations of Arteries by Embolism in the Course of Cardiac Disease, By ERNEST BARIE.
2. Social Medicine, By Professor LANDOUZY.

1. **Obliterations of Arteries by Embolism in the Course of Cardiac Disease.**—Barie discusses the embolisms which take place in the various arteries, beginning with the aorta and passing down through the arteries of the extremities, of the viscera, and of the organs of sense to the capillaries. He briefly states the symptomatology and mentions the little that can be done in the way of treatment.

2. **Social Medicine.**—Landouzy protests against the inanity of enumerating statistically the causes of death, and thence calculating the mortality of tuberculosis. His impression is that the belief in the progress of tuberculosis is of medical rather than statistical origin.

February 7, 1906.

1. The Hepatalgia of Asthmatics, By A. GILBERT and MAURICE VILLARET.
2. Innervation of the Gallbladder, By J. P. LANGLOIS.
3. The Administration of Valerian, By ALFRED MARTINET.
4. Beriberi, Scurvy, and Barlow's Disease, By R. ROMME.

1. **The Hepatalgia of Asthmatics.**—Gilbert and Villaret report three cases of asthma in which there was associated a pain in the hepatic region, either spontaneous or provoked, coming on at all stages of the asthma, less pronounced at the onset of the attacks, but increasing in severity until it finally became a source of constant torture. The hepatalgia was not accompanied by any increase in the size of the liver, or, in the three cases reported, with a specially bad condition of the circulation. The authors conclude that the pain forms one symptom in a syndrome produced by a suprahepatic hypertension.

2. **Innervation of the Gallbladder.**—Langlois reviews the literature on this subject very briefly for the purpose of pointing out the uncertainty which exists. All authors agree in regard to the spontaneous contractility of the gallbladder, but disagree widely as to the functions of the nerves which supply it. Thus the splanchnic nerve has been thought by some to play the part of a constrictor, by others that nerve has been considered partly motor and partly inhibitory, and by still others to be mainly inhibitory. At the same time just as varied opinions regarding the functions of the

pneumogastric nerve in its supply to this viscus are maintained.

3. **Administration of Valerian.**—Martinet gives the chemical composition of valerian and then a large number of formulæ for the prescription of the drug in many forms.

4. **Beriberi, Scurvy, and Barlow's Disease.**—Romme refers to Schubert's work on the differential diagnosis between beriberi and scurvy, and quotes the latter author as saying that Barlow's disease is only a form of scurvy.

February 10, 1906.

1. Importance of the Study of Colloid Substances in Biology and Therapeutics, By HENRI ISCOVESCO.
2. The Bacillus Fluorescens Liquefaciens in Various Bronchopulmonary Diseases,

By FERRY and A. MANDOUL.

3. The Proper Ampullæ in Radiotherapy, By H. NOIRE.

1. **The Study of Colloid Substances.**—Iscovesco describes the various optical, electrical, and chemical properties which characterized colloid substances, and points out that the phenomena they produce are of considerable importance to the biologist and the pathologist. He adopts the definition of Graham, who distinguished a colloid from a crystalloid substance as one which, when united with water, presents the peculiarities which characterize a gelatinous solution.

2. **The Bacillus Fluorescens Liquefaciens in Bronchopulmonary Diseases.**—Ferry and Mandoul claim to have established (a) that this bacillus is associated with others in various affections of the bronchi and lungs; (b) that it may suffice to produce a catarrhal condition of the respiratory passages when the organism is debilitated by a general infection; (c) that it may induce various pulmonary manifestations which are termed grippal.

3. **The Proper Ampullæ in Radiotherapy.**—Noire says that the best results are to be obtained when the ampullæ have an anticathode of platinum, or of other metal reinforced, have very thin glass and a diameter not exceeding eight centimetres.

SEMAINE MEDICALE.

February 7, 1906.

The Yellow Body, By Prof. R. DE BOVIS.

February 14, 1906.

1. Splenocleisis in the Treatment of Splenic Anæmia and the Disease of Banti, By B. SCHIASSI.
2. The Mortality from Pulmonary Tuberculosis in France and Germany.

1. **Splenocleisis in the Treatment of Splenic Anæmia and the Disease of Banti.**—Schiassi defines as splenic anæmia a disease characterized by a slowly progressive anæmia preceded and accompanied by a very considerable hypertrophy of the spleen without leucæmic alteration of the blood and without adenopathy. The clinical and anatomical characteristics of this disease were established by Banti in 1882. In 1894 the same author described a splenomegaly in connection with cirrhosis of the liver associated with anæmia which presented remissions and exacerbations, but had a progressive course. This latter is still known as the disease of Banti. In both of these diseases the indications are to diminish the quantity of blood which circulates in the spleen and to render the circulation more rapid. Schiassi has designed an operation, which he terms splenocleisis, to induce the formation of a large capsule over the larger part of the spleen for the purpose of attaining both of these desired results. The spleen is laid bare by an incision and separated from its surroundings except at the hilum. Strips of gauze are then introduced so as to cover the surface of the spleen, except at the hilum, and left in situ, with their ends protruding from the wound, for five or six days. At the end of that time the strips of gauze are removed. The formation of a large quantity of perisplenic tissue is thus provoked which compresses the organ more

and more so as to gradually reduce its volume and to lessen the passive hyperæmia of which it is the seat. The author reports two cases on which he has performed this operation.

2. **Mortality from Pulmonary Tuberculosis in France and Germany.**—After a comparison of the official figures it appears that the mortality from pulmonary tuberculosis in cities of more than 15,000 inhabitants was slightly greater in France than in Germany during 1901, 1902, and 1903.

BERLINER KLINISCHE WOCHENSCHRIFT.

January 22, 1906.

1. Experiences with Marmorek's Serum in the Treatment of Pulmonary Tuberculosis,

By E. STADELMANN and A. BENFEY.

2. Marmorek's Antituberculosis Serum, By E. LEVIN.

3. The Anticomplements, By C. MORESCHI.

4. Rise of Temperature After the Use of Thiosinamine, By E. BRINITZER.

5. The Prognosis of Otogenous Meningitis, By B. HEINE.

1 and 2. **Marmorek's Antituberculosis Serum.**—Stadelmann and Benfey used Marmorek's serum in five cases of pulmonary tuberculosis with no favorable result whatever. In every instance they noted disagreeable after effects. The subjective feelings of the patient were in no way influenced. Levin summarizes the results of his collective investigation from a number of Swedish, Finnish, and Norwegian sanatoria. One hundred and fifty-six cases are analyzed, including twenty-six cases of surgical tuberculosis. In a few cases some temporary improvement was observed, but altogether the results of the treatment were unsatisfactory. In the cases benefited, the improvement was both objective and subjective, the patients' strength, dyspnoea, and appetite improving and some of the dullness becoming diminished. Some of the surgical cases were also temporarily improved.

3. **The Anticomplements.**—Moreschi concludes that precipitine and precipitinogen combine in various proportions, and thus form a variety of precipitates which have a more or less active anticomplementary action. All conditions which lead to an increase of precipitation, also favor anticomplementary formation. Immune bodies are not influenced by the precipitate. Anticomplementary sera, as described by Ehrlich, Morgenroth, and Bordet, are precipitating sera.

4. **Rise of Temperature Following the Use of Thiosinamine.**—Brinitzer reports a case of scleroderma treated by injections of thiosinamine. Each treatment was followed by a rapid and high rise of temperature which appeared even when small doses were administered. The patient finally became accustomed, however, to the use of the drug.

5. **Prognosis of Otogenous Meningitis.**—Heine says that the outlook of otogenous meningitis is not as bad as it formerly was, as it is known that there are meningitic processes which are curable or even get well spontaneously. The purulent form is not so favorable, although the diagnosis is more easily made than formerly by means of lumbar puncture. It is even possible for a diffuse meningitis to go on to recovery. Subdural suppurations often present the picture of a severe meningitis, but are nevertheless curable. Even cases of acute progressive purulent meningitis have been cured.

January 29, 1906.

1. Sodium Iodate and Cerebrospinal Meningitis, By G. EDLEFSEN.

2. Concealment of Glucose and Glucosamine Through Other Solutions, By J. LEWINSKI.

3. Radiological Examination of the Stomach and Its Value in Diagnosing Gastric Carcinoma,

By G. HOLZKNECHT.

4. Alypin in Rhinological Work, By G. FINDER.

5. Clinical Experiences with the Anæmias, By F. ROLLIN.

6. Pubiotomy; A New Method of Increasing the Capacity of a Contracted Pelvis, By W. STOECKEL.

1. **Sodium Iodate.**—Edleson reports four cases of cerebrospinal meningitis, and some cases of chronic glandular enlargement and one of chronic perityphlitic exudate, which were cured by the use of sodium iodate. In the meningitis cases, the vomiting of the early days was notably relieved by the drug. He warmly recommends the preparation and urges the profession to use it, not only in cases of meningitis, but as well in all instances in which energetic iodine action is sought.

5. **Anæmia.**—Rollin concludes that there is a distinct relation between the activity of the stomach and the nourishment of the blood. A parallel can always be found between the two conditions, especially in a majority of the cases of achylia gastrica. A useful remedy in anæmia, therefore, is Pawlow's suggestion of the gastric juice of the dog, as a normal condition of the blood can be produced by it.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT.

January 30, 1906.

1. Local Anæsthesia with Novocaine-Suprarenin, By F. LIEBL.
2. Menge's Operation of Intraperitoneal Shortening of the Round Ligaments, By VON STEINBUECHEL.
3. Uric Acid and Xanthin Excretion in Leucæmia, By F. ROSENBERGER.
4. Quantitative Determination of Sugar in the Urine, By R. LEVY.
5. Cow's Milk Precipitine in the Blood of a Four Months' Old Marantic Child, By E. MORO.
6. A Case of Gastropulmonary Fistula, By A. LOEB.
7. Cure of a Case of Pneumococcus Peritonitis, By F. DAXENBERGER.
8. The Endotoxines, By A. WOLFF.

1. **Novocaine-Suprarenin Anæsthesia.**—Liebl describes novocaine as a white, crystalline powder of synthetic origin, the anæsthetic properties of which are two thirds greater than those of cocaine in one half per cent. solutions. Mixed with suprarenin, it forms an efficient, nonirritating local anæsthetic. The author has used it in 206 cases by the infiltration method. To every fifty c.c. of a one quarter per cent. solution, he has added three drops of suprarenin. He gives minute directions for its employment and its preservation. For immediate sterilization the entire solution may be boiled for a few moments without disturbing its efficiency.

2. **Menge's Operation.**—Von Steinbuechel compares the intraperitoneal method of shortening the round ligaments as advocated by Menge with that devised by Palmer Dudley. He favors the former, which is a modification of Dudley's operation, because it consumes less time and because it places the uterine insertions of the round ligaments at their proper anatomical site. The author gives strict indications for the opening of the abdomen to correct retrodisplacements of the uterus, and insists that Alexander's operation should be the one of choice in the case of a movable retroversion or retroflexion.

3. **On Leucæmia and Its Treatment.**—Rosenberger concludes that the treatment of leucæmia with the Röntgen rays causes a change in the amount of uric acid excreted, a phenomenon not hitherto observed in other diseases. A decrease in the amount of uric acid during treatment is a favorable prognostic sign, the amount increasing again as the patient becomes worse. The excretion of xanthin bases increases both during and after the employment of the Röntgen rays. In pseudoleucæmia, splenic anæmia, the rays seem to have a beneficent effect upon the spleen, but no case has yet been cured. In this disease, there seems to be no influence of the rays upon the uric acid excretion.

February 6, 1906.

1. Seroactivity and Phagocytosis, By M. GRUBER and K. FUTAKI.
2. The Fight Against Diphtheria, By B. FISCHER.
3. Pyelonephritis in Pregnancy, By E. RUPPANNER.

4. Treatment of Acute Suppurative Processes by Bier's Hyperæmia, By F. COLLEY.
5. Bier's Hyperæmia, By HERHOLD.
6. Technics of Bier's Method of Hyperæmia, By J. MINDES.
7. Pathogenesis of Congenital Constipation, By A. BITTORF.
8. Röntgen Rays and Radium in the Treatment of Epithelioma, By E. SCHIFF.
9. Intrauterine Rigor Mortis, By G. SOMMER.

1. **Seroactivity and Phagocytosis.**—Gruber and Futaki find that virulent typhoid bacilli experimentally injected into guinea pigs, are not attacked by energetic leucocytes unless they have previously been subjected to the action of alexines. The reaction of the serum varied widely with other races of bacteria, whether it had been previously made active or not. Phagocytosis is not the primary, but the secondary protecting agent in the body, the former being the thermolabile substances. If, then, bacteria injected into the circulation at once evoke phagocytosis, the blood must already be actively bactericidal, that is, it must contain alexines.

2. **Diphtheria.**—Fischer points out the importance of thorough disinfection of persons recovering from diphtheria and of their surroundings. The secretions, too, must be disinfected, such as the sputum, and the secretions from the nose, the ears, the conjunctiva, the vagina, etc. The clothing and immediate personal effects are not to be finally disinfected, until two successive cultures fail to show the presence of diphtheria bacilli.

3. **Pyelonephritis in Pregnancy.**—Ruppanner reviews the literature of the subject. He accepts compression of the ureter as the most frequent cause of the disease. He considers the symptomatology and discusses the treatment. The first purpose to be achieved is to disinfect the urine. The question of inducing labor must be decided in individual cases. The greater number of these cases progress to complete recovery, although very often the patient remains an invalid for many months. If the patient's general condition does not become greatly deteriorated, the author thinks a waiting policy may be pursued until the child is viable. Nephrectomy has been rarely performed for pyelitis during pregnancy.

4 and 5. **Bier's Hyperæmia.**—Colley and Herhold contribute to the constantly growing literature on this subject. The former has had excellent results in the treatment of suppurative conditions in the extremities and especially upon the skin (furuncles and carbuncles). In pelvic disease of inflammatory character, good results were also achieved. He warns against the use of the method, however, in diabetics, as he has experienced gangrene of the skin in these patients. Herhold has used the method in the Hamburg barracks, especially in cases of panaritium and furunculosis with beneficial results, and regards its employment as a distinct advance in surgical procedure. He says it is no surgical panacea, however, and thinks its use in severe phlegmons is justified only under most conscientious observation.

ZENTRALBLATT FUER CHIRURGIE.

February 10, 1906.

1. The Use of Streams of Water in Surgery and Orthopaedics, By MACHAL.
1. **Water Streams in Surgery and Orthopaedics.**—Machal describes an apparatus for directing streams of water upon the body which acts so that the force of the stream is always constant, is measurable and controllable. The device is simple and can be employed upon patients in bed. The present article is only a preliminary contribution.

ZENTRALBLATT FUER GYNAEKOLOGIE.

February 10, 1906.

1. The Dangers of Ventral Fixation, By A. CALMANN.
2. Atony of the Nonpregnant Uterus, By R. ASCH.

3. Cessation of Menses During Nursing.

By E. ESSEN-MOELLER.

1. **Dangers of Ventral Fixation.**—Calmann records a case in which a very difficult operative delivery of twins was required to deliver a woman who had had a ventral fixation of the uterus performed two years previously. The posterior lip of the cervix lay above the sacral promontory, and could not be reached even with the whole forearm in the vagina. The pregnant uterus had grown at the expense of its anterior wall.

3. **Menstruation and Nursing.**—Essen-Moeller finds, from a study of his cases, that menstruation appears in nursing women in about sixty per cent. of all cases, and must therefore be regarded as a normal procedure. In one third of the cases, the menses appeared in the first two months and in the later months with diminishing frequency. The fact of primiparity seemed to have no bearing upon the appearance of the flow.

RIFORMA MEDICA.

February 3, 1906.

1. Contribution to the Treatment of Prolapse of the Rectum, By G. SERAFINI.
2. Concealed Intestinal Hæmorrhages in Typhoid Fever, By D. ROMANI.
3. The Diazo Reaction in the Presence of Indican in the Urine of the Insane, By O. PINE and G. BENINI.
4. The Action of Adrenalin in Werlhof's Diseases, By A. CIANNI.

2. Concealed Intestinal Hæmorrhages in Typhoid.

A study of the diagnosis of concealed hæmorrhages in typhoid leads Romani to the following conclusions: Every hæmorrhage which occurs in the course of a typhoid infection is preceded for several days by the appearance of small traces of blood in the fæces, which, to all appearances, are normal. These traces of blood are recognizable only by special tests. When during a typhoid infection, symptoms of peritonitis develop, the presence of blood in the fæces is a valuable differential sign between peritonitis due to perforation and that due to propagation by continuity. The blood is encountered constantly in the first variety, while it is absent in the second.

3. **Diazo Reaction and Indican in the Urine of the Insane.**—Pini and Bennini found that the diazo reaction is negative and that the indican reaction is absent in the great majority of insane patients. Both reactions, however, occur very distinctly in severe maniacal excitement, and in profound psychical and motor depression in melancholia. Both reactions were found present in four cases of progressive paralysis in the final stage of the disease. While the diagnostic value of these two reactions is not absolute, and while both may be absent in the mentioned forms of insanity, these phenomena indicate profound organic intoxication, and as such testify to an unfavorable prognosis.

ROUSSKY VRATCH.

January 7, 1906.

1. The Operative Treatment of Diphtheritic Stenosis of the Larynx in Infants, By V. I. MOLTSCHANOFF.
2. Peripleuritis, By N. S. PERESCHIVKINE.
3. Epidemic Cerebrospinal Meningitis, By G. N. MAGAKYANE.
4. The Simplest Apparatus for the Manufacture of Oxygen, According to George Jaubert's Method, By P. K. BERIZKINE.

1. **Diphtheritic Stenosis of the Larynx.**—Moltschanoff analyses the material at the Infant Hospital at Moscow during the past ten years, with reference to the rôle of intubation in the treatment of diphtheritic stenosis in infants. The results of the treatment in the hospital mentioned showed a mortality after intubation of 52.4 per cent., a figure lower than those reported by a number of other European clinicians, ranging from 76 per cent. (Klein) down to 56.5 per cent. (Thumer). Moltschanoff's object was to show the advantage of intubation in diphtheria in early

infancy. The chief argument of the opponents of intubation in early infancy is that the larynx is so narrow and small that intubation is very difficult. He met in his ten years' experience in the hospital only three such cases: One was in an infant of eight weeks, on account of the small size of the larynx, and the other two were in the shape of œdema and of spasmodic contraction, respectively. But in all three patients, the intubation was performed. Only in a single instance in which three attempts at intubation were made, a tracheotomy was found necessary on account of the spasm.

2. **Peripleuritis.**—Pereschivkine reports two cases of peripleuritis, which is a name applied to inflammatory processes in the tissues superficial to the pleura. It is probably an independent infection of the intercostal lymphatic glands, which is followed by the extension of the process to the neighboring tissues. The treatment of peripleuritis should consist, if possible, in early and thorough incision, followed by curetting and the removal of the walls of the sac. The ribs must be resected if they interfere with the proper drainage of the sac. Small incisions and temporary measures such as aspiration only delay recovery. The prognosis is good if surgical treatment be promptly and thoroughly applied.

3. **Cerebrospinal Meningitis.**—Magakyane insists that the best method of treatment for epidemic meningitis is lumbar puncture, whereby the most distressing symptoms of the disease, such as pain, and stiffness of the joints of the neck and of the spine are relieved. The simultaneous presence of two different germs in cases of cerebrospinal meningitis suggests the confirmation of the thought of Dieulafoy that there is no cerebrospinal meningitis, but there are cerebrospinal meningitides.

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

February, 1906.

1. On the Extermination of the Mosquito, By A. H. DOTY.
2. Cystinuria, By W. M. MARRIOTT and C. G. L. WOLF.
3. The Present Status of Blood Cryoscopy in Determining the Functional Activity of the Kidneys, By E. BEER.
4. Report of a Case of Hypernephroma, By W. J. TAYLOR.
5. A Case of Double Pyonephrosis, with Autopsy Report, By M. KROTOSZYNER.
6. Abscess of the Brain, with Report of Five Cases, By H. F. STOLL.
7. Primary Cavernous Sinus Thrombosis, By W. ZENTMAYER and T. H. WEISENBURG.
8. Myxœdema with Ascites. Report of a Case, By A. E. HERTZLER.
9. Spinal Cord Degenerations in a Case of Acromegaly, with Tumor of the Pituitary Region, By A. M. BARRETT.
10. Operations for Relief of Pelvic Diseases of Insane Women, By L. M. BROWN.
11. Researches on the Blood of Epileptics, By B. ONUF and H. LOGRASSO.
12. Gunshot Wounds of the Abdomen, By G. T. VAUGHAN.
13. Complete Amputation of the Thigh, with Replantation, By A. CARREL and C. C. GUTHRIE.
14. Tetany. A Report of Nine Cases, By C. P. HOWARD.

1. **On the Extermination of the Mosquito.**—Doty calls attention to the conclusive evidence that yellow fever is transmitted only by the stegomyia variety of mosquito. This, and anophiles the bearer of malarial fever, are at present the only known varieties which carry infection. To exterminate the mosquito we must be familiar with its habits. Most important is it to remember that all varieties propagate only in water. The life of a mosquito may be prolonged through weeks and months under favoring conditions, nevertheless, it easily succumbs to all sorts of influences. With the exception of one variety mosquitoes do not willingly go

far from their breeding place. The common *Culex sollicitans* breeding in salt water swamps can be exterminated only by ditching and draining them. Other varieties which breed in stagnant water inland can be exterminated by the removal of all such accumulations, and by the free use of crude petroleum.

6. Abscess of the Brain.—Stoll agrees with those who divide the course of this disease into three periods. The first may be absent or may show meningoencephalitis, the second may be quiescent for months or years, but the pus is never absorbed spontaneously, the third is the urgent one with possible fatal rupture into the lateral ventricle, oedema of the brain or septic meningitis. The general symptoms are severe headache, projectile vomiting, normal or subnormal temperature, slow pulse, occasional paralyses, convulsions, and optic neuritis. The bowels are usually constipated and the urine may contain albumen. It should be differentiated from meningitis, brain tumor, inflammation of the lateral sinus, otitis media, and epilepsy. Early diagnosis and early operation often yield good results. Many cases of this disease are avoidable and signify unsatisfactory treatment of injuries of the head, or suppurative otitis media.

10. Operations for Relief of Pelvic Diseases of Insane Women.—Broun analyzes the reported work upon this subject, especially calling attention to the favorable results obtained by Rohé, Hobbs, Manton, and Picqué. In his own experience he can report twenty cases in which mental recovery followed and probably resulted from surgical operations. In all these cases there was marked pathological condition of the organs or tissues operated upon. His aim in all cases was to remove only diseased tissue, and not to cure insanity by the removal of organs which apparently were healthy. He thinks the error of alienists, who are not gynecologists is in the conception that to attempt to benefit such a condition as insanity by surgical means necessarily involves a radical procedure like the removal of the ovaries. He thinks that they forget that the nervous conditions arising from such lesions as laceration of the cervix and pelvic floor are often more pronounced than those which proceed from more extensive disease of the tubes, ovaries, or uterus.

11. Researches on the Blood of Epileptics.—Onuf and Lograsso made their investigations with reference to the formed elements of the blood for the following purposes: 1. To establish in the periods of freedom from seizures the condition of these elements. 2. To determine whether during seizures any changes in these elements could be observed, whether such changes were caused by the attack itself, whether they were caused by the seizures, or whether they were due to possible toxic changes. The examinations were made upon only one patient. The red corpuscles revealed nothing characteristic or definite. The leucocyte count fluctuated markedly and could not be explained by the influence of meals, work, and sleep. A leucocytosis might be present just before a seizure, and if so it could not be a secondary phenomenon produced by the seizure. A grand mal seizure was not necessarily preceded or ushered in by a leucocytosis. No absolute parallelism was found between seizure and leucocytosis, it was also found that leucocytosis might be more or less independent of the seizure. Comparison of this case with one in which the seizures occurred at long intervals showed that when the intervals were long the fluctuations in the leucocyte count are slight and concentrate around the period of seizure.

14. Tetany.—Howard states that the first indication in treatment is to correct coexisting diarrhoea, vomiting, pregnancy, etc. In the gastric variety the stomach should frequently be irrigated. Catharsis, diaphoresis, and diuresis must all be accomplished. Gastrojejunostomy or pyloroplasty must be performed

if there is stagnation of the stomach contents. In pregnancy and in cases in which there is thyroid deficiency thyroid extract should be given. For the spasms themselves the indications are rest in bed, cold to the spine, tepid baths, hot packs, opium, bromides, and chloral. Chloroform may be given to lessen the severity of the spasms.

AMERICAN JOURNAL OF SURGERY.

February, 1906.

1. The Technique of Urethral Dilatations, By F. C. VALENTINE and T. M. TOWNSEND.
2. Wandering, Parasitic, or Aberrant Retroperitoneal Uterine Fibromyomata. Two Cases, By I. S. STONE.
3. Exstrophy of the Bladder; Operation; Result, By R. GUIERAS.
4. The Office Treatment of Rectal Diseases and Its Limitations, By J. P. TUTTLE.
5. Plaster of Paris and How to Use It, By M. W. WARE.
6. Some Observations on Abscess of the Liver, By L. SEXTON.
7. A Case of Siderosis Bulbi, By W. C. MCKEEBY.

1. The Technique of Urethral Dilatations.—Valentine and Townsend give the following as the necessary step for introducing a dilator: 1. Hold the dilator as a pen, beak downwards. 2. Prolong the left Poupart's ligament by imaginary line over right thigh. Rest the little finger of right hand on imaginary line, bringing tip of instrument to the meatus. 3. Take the penis with the left fingers and gently hook it upon the point of the dilator until the latter's point has traversed the fossa navicularis. 4. Extend the penis down the imaginary line until the urethra has been drawn over the dilator, advancing the latter. 5. As the bulbous urethra is entered the point of the dilator seems free and remains so until the opposition of the compressor muscle is felt. 6. Pass the dilator, in the same plane as before, with the penis over the left thigh, describing that part of a circle which will bring the dial (of the dilator) opposite the patient's linea alba. 7. Raise the instrument and the penis to the median line, causing the compressor muscle to yield. 8. Change the direction of the point from the urethral floor to the roof to avoid the colliculus seminalis and prostatic ducts. 9. Sink the handle between the patient's thighs, its point passing along the roof of the posterior urethra will enter the bladder.

4. Office Treatment of Rectal Diseases and Its Limitations.—Tuttle thinks practice in rectal diseases has a threefold tendency as follows: 1. Toward a more general resort to operative measures. 2. Toward a wider application of local anæsthesia. 3. Toward a great increase in office treatment. The increase in surgical operations is due to the failure of nonoperative measures to cure, to the diminishing dread of anæsthesia, to the knowledge that most of the minor rectal operations can be performed under local anæsthesia, to the fact that radical operations for hæmorrhoids, fissures, and fistulas can be done with little pain and little detention from business. Local anæsthesia is safer than general narcosis, is more quickly applied, is easier for the surgeon, requires one less assistant, and can be used in one's office. Increase in office practice is due to the increase in local treatment, and to the fact that there is often more satisfactory recovery when one is moving about. Office operations should be performed only under aseptic conditions, and it is extremely important that great care should be exercised in selecting cases which are suitable for all the contingencies of office practice.

6. Abscess of the Liver.—Sexton concludes that abscess of the liver may follow malaria and typhoid fever on account of infection and the congested condition of the liver. Abscess may be present, while fever, dysentery, or jaundice may be absent. Aseptic aspiration is the means for clearing up the diagnosis. The finding

of malarial plasmodia in the blood or amœbæ coli in dysenteric stools aids in the diagnosis. With perfect adhesion and good drainage, the prognosis in single tropical abscess should be good. Good drainage without irrigation is the safest rule for treating abscess of the liver. It is thought that dysentery as a cause of liver abscess has been exaggerated.

EDINBURGH MEDICAL JOURNAL

February, 1906.

1. The Clinical Value of Bacteriology,
By F. FREELAND FERGUS.
2. Beriberi,
By D. G. MARSHALL.
3. Typhoid Bacilluria,
By R. D. BROWN.
4. Notes on a Case of Congenital Atresia of the Choana,
By W. G. PORTER.
5. Spondylitis or the Vertebral Type of Arthritis Deformans,
By R. L. JONES.

1. **The Clinical Value of Bacteriology.**—Fergus refers particularly to the bearing of this subject upon ophthalmic practice, and proposes the following conclusions: 1. Most cases of conjunctivitis heal of their own accord, like the specific fevers. In respect to remedies proposed, he believes their efficacy is inversely as their strength. 2. In agar agar tubes with cultivations upon them we have a means of investigating this subject. 3. The author has not obtained the good results from protargol and agyrol in ophthalmic disease which others have claimed to obtain. 4. He does not believe that they have the efficacy which is claimed for them.

2. **Beriberi.**—Marshall tells of an infected crew which landed at Leith, twenty-five of the twenty-nine suffering with beriberi. The ship had come from Rangoon. He concludes that the ship probably became infected at Rangoon, but whether by an ambulatory case, infected food, or cargo shipped at that port is not known. The fact that both officers and men were affected points to conditions which were common to all. These were (1) water supply, (2) weather conditions, (3) nature of cargo, and (4) food supply. It is believed that the disease is not carried by water, and the weather conditions could not originate it. It is quite probable that it was due to the nature of the cargo (rice meal), and the enormous number of insects of various kinds on the ship. The food may have been infected when taken on board, and was probably infected at a later period by the insects which had invaded every portion of the ship.

3. **Typhoid Bacilluria.**—Brown summarizes his conclusions as follows: 1. The bacillus typhosus exists in the urine of thirty to thirty-five per cent. of typhoid cases. 2. No symptoms are caused in most cases, the presence being revealed by bacteriological examination. 3. Bacilluria is frequently accompanied by albuminuria and pyuria. 4. The bacilli usually appear in the third or fourth week, and persist for weeks or months. 5. Bacilluria is more frequently present in severe cases and in those with complications. The severity of the case is not affected by the condition which is of no prognostic significance. 6. The presence of bacilli in the urine does not aid in the diagnosis, except in some typhoid septicæmic cases. 7. There is more danger from bacilli in the urine than in the stools, because (a) disinfection of the urine is often neglected, (b) contamination of the clothes by the urine is often overlooked, (c) pollution of a water supply is more probable from urine than from feces. 8. Typhoid patients should micturate into receptacles which will permit disinfection of the urine. Urination during bathing should be forbidden. 9. Urotropine should be given after the third week, for ten days, and after a week's interval for another ten days. The urine should be examined bacteriologically.

5. **Spondylitis, or the Vertebral Type of Arthritis Deformans.**—Jones states that this term was used by

Osler, and he speaks of the following clinical features: 1. A greater or less immobility of the entire spine or a part of it, with no marked pain on pressure or percussion. 2. A backward bowing of the spine, especially of the chest region, causing the head to be thrown forward and the chin depressed. 3. A weakened condition of the muscles of the rump, neck, and extremities, with possible atrophy of the muscles of the back and shoulder blade. 4. A lowering of sensitivity, especially of the skin branches of the dorsal, cervical, and lumbar nerves. 5. Various irritation phenomena, such as paræsthesia, pain in the muscles of the neck and back.

Letters to the Editors.

THE EGG IDIOSYNCRASY.

BROOKLYN, N. Y., March 6, 1906.

To the Editors: As a contribution to the discussion of the Egg Idiosyncrasy perhaps you will permit me to point out that in China eggs are considered a delicacy only when they are decidedly "ancient," as a result of burial in chalk or sawdust for several years. Patients who have a real or fancied objection to fresh eggs might take better to the ancient variety and thrive on them. After keeping for several years eggs become almost completely green, and in China the price for such eggs rivals that given in this country for the choicest wines.

E. I. KELSCH.

Proceedings of Societies.

MEDICAL ASSOCIATION OF THE GREATER CITY OF NEW YORK.

Annual Meeting, January 8, 1906.

The President, Dr. T. E. SATTERTHWAITE, in the chair.

Election of Officers.—The following officers were re-elected: President, Dr. T. E. Satterthwaite; vice-president, Dr. R. E. Van Gieson; recording secretary, Dr. P. Brynberg Porter; chairman for the borough of Manhattan, Dr. J. Blake White; member of the executive council, Dr. Reynold W. Wilcox.

The President's Address.—Dr. SATTERTHWAITE made a short address in the course of which he outlined the policy of the association.

"Symposium" on Diseases of the Upper Air Passages.—The first paper was by Dr. W. FREUDENTHAL on Recent Advances. While we now knew, he said, that several parts of the upper air tract were the portals for the entrance of infectious organisms, too much stress had been laid upon the established fact that the faucial tonsils were often involved in tuberculosis and rheumatism, since from this it was concluded that they constituted the main portals for many an infectious microbe. He had nothing to say against the removal of diseased tonsils, whether hypertrophied or not, but when Gürich maintained that the tonsils were the main portals of any infection and required removal under all circumstances, he felt constrained to contradict him. The assertion of Gürich, that during the past five years he had cured the great majority of his rheumatics by his so called tonsillar therapy, seemed too optimistic. Dr. Freudenthal could not believe that many would adopt the practice of removing a tonsil when nothing pathological could be found about it. The danger lay in overdoing things, and he mentioned the case of a lady suffering from advanced pulmonary and laryngeal tuberculosis, who at a popular resort was put under general anæsthesia and had one slightly enlarged tonsil radically removed. In consequence of this she lost her life from profuse hæmorrhage. As the tonsils could be so readily examined, most physicians did not look

to other parts of Waldeyer's ring for initial infections. A number of years ago Dr. Freudenthal presented the proof for his theory that the upper portion of this ring, the region of the adenoid tissue of the vault of the pharynx, very often formed the portal for the primary infection in tuberculosis, and he believed that what held good for tuberculosis was equally applicable to other infectious diseases. Of late his attention had been directed to another part, the region of the lingual tonsil, and he had been astonished to find so many enlarged lingual tonsils in tuberculous patients in his service at the Montefiore Home and the Bedford Sanatorium for Consumptives. He was convinced that such hypertrophy must have some bearing upon tuberculosis, but whether it was the cough which caused this glandular tissue to enlarge, or whether it was the manifestation of a primary infection or of a secondary one extending from the faucial or pharyngeal tonsil, it was at present impossible to say.

In speaking of the improvement which had of late years taken place in the treatment of tuberculosis of the upper air tract, he said it was not too much to assert that, with proper care and attention to detail, the great majority of the patients could be relieved of their dysphagia and the irritating cough which had its origin in some part of this tract. Besides drugs, the actinic and the Röntgen rays, the high frequency current, and the rays emanating from radium had all proved of some benefit in a limited number of cases. While it was true that the results as to relief of very distressing symptoms were extremely satisfactory, it could not be denied that definite cures of laryngeal tuberculosis were not so readily obtained. That depended in part upon the vitality, the constitution, and the power of resistance of the patient, to alter which the whole metabolism must be changed. This was being tried by several observers abroad and here by means of injections of the old tuberculin of Koch, and, personally, he felt encouraged to continue these injections. Nothing, he thought, was more pernicious in tuberculosis than the now prevalent discarding of all medication and giving the patients only fresh air and a diet. It to a great extent demoralized the patient and it robbed the physician of the scientific stimulus for new ideas and new remedies.

Marked progress had been made in relieving deformities of the face by the injection of paraffin. Unfortunately, however, this procedure was not without danger, chiefly affecting the eye. Several cases had been reported in which total blindness of one eye had resulted; this form of amaurosis was caused, it appeared, by particles of the paraffin getting into the *arteria centralis retinae* and acting as an embolus. In order to avoid accidents, the following rules, outlined by Uthoff and others, should be followed: 1. Do not inject too much paraffin. 2. Make the intervals between the injections long enough. 3. During injection cut off as completely as possible the circulation in the surrounding bloodvessels. 4. The melting point of the paraffin should not be too low. 5. Avoid injections in a centripetal direction of larger venous vessels. In speaking of radium, he said its rays shared with others the power of relieving certain pains and they had, like the others, brought to a cure cases of carcinoma of the skin of the face, of lupus, and of rodent ulcer. But, in addition, they seemed to have some beneficial effect on internal malignant tumors, as of the oesophagus, etc., in other words, on growths situated in cavities which could be entered very easily by the emanations. It would be a great loss, he thought, if these investigations should be dropped in consequence of the reaction following the foolish enthusiasm of some writers a few years ago. For dry and atrophic catarrh of the nose, Spies, of Frankfurt, had used a new suction method with good results. For the endoscopia

examination of the maxillary sinus, Hirschmann, of Berlin, had devised several novel instruments. This method might prove as important as cystoscopy. The submucous resection of depleted septa and spurs, especially after the method of Bellenger, was one of the recent advances in nasal surgery. For the control of nasal hæmorrhage, Mulford, of Buffalo, had successfully employed the hypodermic injection of adrenal extract into the upper lip. In two instances Dr. Freudenthal had succeeded in promptly checking severe pulmonary hæmorrhage by the injection of adrenalin into the arm, and he thought it possible that in nasal hæmorrhages the same results could be obtained if we avoided the painful injection into the lip and chose another less sensitive point. In closing, he referred to Dr. Dawbarn's method of decreasing the loss of blood in operations upon any part of the body by applying Esmarch's constriction to the upper part of the thigh or the arm, thus cutting off the chief blood supply. It was his conviction that in nonmalignant tumors of the superior maxilla the greatest danger, viz., from loss of blood, might in this way be avoided, and he thought that the method would prove equally satisfactory in accessory sinus work and in certain amygdalotomies in persons over twenty or thirty years of age.

Hypertrophy of the Pharyngeal and Fauical Tonsils.

—Dr. F. C. RAYNOR read a paper on this subject. Adenoids, he said, were not, strictly speaking, new growths, being only an overgrowth of the normal histological elements of the mucous membrane. After describing the symptoms of the condition and referring to the reflexes occasioned thereby (such as asthma, spasmodic croup, chorea, epilepsy, neuralgias, and nocturnal enuresis), he stated that many obscure fevers occurring in children might be attributed to an acute infection of this tissue, and that a large proportion of the inflammatory affections of the middle ear owed their origin to the same cause. Also, these lymph masses in the direct current of the inspired air formed a favorable place for the lodgment and propagation of all sorts of germs, and consequently rendered the possessor more susceptible to all the infectious diseases of childhood. Speaking generally, the use of the sedative and astringent applications commonly employed in treating catarrhal conditions in this locality, while sometimes relieving symptoms, was rather to be discouraged than commended, as it simply delayed the application of the only effective remedy, removal by surgical means. Curetting was the method which he had found most satisfactory, and with Gottstein's curette and a curette especially designed for the posterior wall, he believed he could clean out a nasopharynx more quickly than in any other way. He almost always employed general anaesthesia with ether, but in exceptional instances had found it possible to remove the growths at his office with or without local anaesthesia. When adenoids and hypertrophied tonsils were both present, he usually attacked both at the same operation, removing the tonsils first. While tuberculous infection was rare in the pharyngeal tonsil, it was exceedingly common in the faucial tonsil. In hypertrophy of the latter, when the enlargement was upward and backward into the soft palate (the so called submerged tonsil), the condition might be mistaken for adenoids. A correct diagnosis could be made, however, by causing the patient to gag, when the forward bulging of the palate would be observed. In speaking of the removal of the tonsils he strongly opposed the very prevalent idea that this was a trivial operation. The usual result of the use of the amygdalotome in the doctor's office was to slice off a piece of the offending organ, leaving behind an infected stump, with its liability to systemic involvement and local inflammation in no degree lessened and with the normal function of the palate still impaired. The only rational method of

dealing with this condition was the total extirpation of the diseased mass under general anaesthesia. Becoming dissatisfied with the results obtained from the use of the guillotine, some years ago he began dissecting out the tonsils, gradually modifying his technique to the operation described in 1903 by his colleague, Dr. W. N. Steers. Occasionally, after recurring attacks of periamygdalitis, or with very friable tonsils, it was necessary to remove the mass piecemeal. During the past five years Dr. Steers and he had operated in this way, with the most gratifying results, on more than a thousand persons, both children and adults.

Disease of the Accessory Sinuses.—Dr. HUBERT ARROWSMITH and Dr. H. L. SWAIN, of New Haven, read papers on this subject. Dr. Swain said that if infected material was not allowed to remain long in the nose, infection of the accessory sinuses would not take place. The first indication for prophylaxis and also for treatment was, therefore, not to neglect mucopurulent catarrh. When frontal sinus involvement had occurred, the diagnosis could readily be made with the aid of a transilluminator if only one side was affected. Without the transilluminator, by spraying out the nose with cocaine and suprarenal solutions to make it as open as possible, then cleansing it first by blowing, and then wiping out the middle meatus of the nose, one could frequently readily detect a stream of pus flowing down from the anterior part of the meatus toward the back of the nose, indicating that the material came from the frontal region. Usually, also, the anterior end of the middle turbinate bone was swollen and club shaped, and in later cases there was almost always granulation tissue in this position. Introducing a probe into the lower part of the infundibulum, and gently producing a little backward and forward motion, would frequently result in pumping down the fluid so directly from the frontal sinus that an absolute diagnosis was immediately established. It was not the cases where the symptoms were severe that were really the most dangerous, and it was not at that stage when the swelling was most pronounced that infection of the other sinuses most frequently took place. This was most apt to occur when the trouble was more or less in subsidence, where there had not been proper drainage, and where there was day after day a slight, dribbling discharge from this cavity. The diagnosis of frontal sinusitis once having been established, the physician in charge of the case should see to it that as long as pain and tenderness excited the patient was daily seen and if necessary daily probed. The use of cocaine and suprarenal solutions rendered the probing of the frontal sinus often perfectly easy and usually painless. When repeated efforts, carefully carried out by competent hands, failed to make it possible to probe the sinus, it was perfectly proper to remove a limited section from the anterior end of the middle turbinate. Spraying or douching with saline and adrenalin solutions was of great service, and the secretions could be softened and kept fluid by the insufflation of boric acid after each cleansing. Having referred to the symptoms and diagnosis of disease of the other sinuses, he said that the indications were the same for all these cavities, viz., probing and curetting sufficiently to produce a free and unobstructed opening for the establishment of perfect drainage, and the maintenance of this until a cure resulted. As in frontal sinusitis, the cleansing of the nose on the part of the patient should be done in all cases. In all, the insufflation of boric acid seemed to be of great value. In acute and sub-acute cases of involvement of the antrum of Highmore a positive cure was often obtained by the simple procedure of puncture, as with Myles's trocar, through the anterior meatus of the nose. The opening was then maintained, and subsequent washings of the cavity could be performed with comparative ease. Dr.

Swain felt positive that if this procedure was more generally adopted, but few cases of chronic empyema would occur. The latter condition apparently more often followed the acute infection in the ethmoid cells, and possibly in the sphenoid, than in the frontal sinus, and perhaps the antrum, because it was with the utmost difficulty that adequate drainage here could be continuously secured for any very long period. Any or all of these cavities might become so acutely attacked or, what was more common, suffer from so acute an exacerbation of a chronic trouble, that simple measures were not to be considered. So threatening and urgent did the symptoms become, involving the probability, if not the actual presence, of meningitis, septicæmia, or pyæmia, that one was compelled to resort to an external operation of one kind or another, not only to give the patient relief from his pain, but to remove, if possible, the actual danger to life. The conclusion of the paper was devoted to a brief consideration of such radical procedures.

Dr. J. W. GLEITSMANN said that the association of rheumatism and amygdalitis was now recognized by all, and he believed that the majority of cases of the latter, especially of the follicular kind, were of rheumatic origin. He had been glad to hear Dr. Freudenthal defend the use of Koch's tuberculin, as he himself had found it of service and was constantly using it. He had not found it so easy to probe the frontal sinus as Dr. Swain would have us believe.

Dr. B. DE F. SHEEDY thought it quite impossible in the majority of instances to probe the frontal sinus, and also said he had discarded the use of the transilluminator.

Dr. BEAMAN DOUGLASS said that his experience coincided with that of Dr. Sheedy. He would not say that the probe had entered the sinus unless he had an x ray picture of it *in situ*. He then spoke of the value in chronic nasal catarrh, and as an adjunct in adenoids, of the internal use of sanguinaria, phytolacca, and pinus canadensis.

Dr. R. C. MYLES said that next to the colon, which was the most susceptible portion of the economy, came the tonsils in their susceptibility to septic infection. He was uncertain as to what was actually the best method of removing the tonsils, and in different cases he was in the habit of using different methods. The so called adhesions after removal were simply a portion of the normal tissue that was left, as he believed it was an impossibility to clear away all the tissue from between the pillars. As to probing the frontal sinuses, he thought this could usually be practised without difficulty in diseased conditions, and the more diseased the parts were, the easier it was. It was a very difficult matter to probe the normal frontal sinus, and, fortunately, this was not necessary. In sinus involvement he was accustomed to use hollow probes, so that irrigation might be practised by means of them.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Meeting of January 3, 1906.

The President, Dr. ARTHUR V. MEIGS, in the chair.

A Description of the Work at the Craig Colony for Epileptics at Sonyea, N. Y.—Dr. W. P. SPRATLING, of Sonyea, in this description referred to the establishment of the Craig Colony in 1894. It embraced 2,000 acres and accommodated 1,050 patients. There was a large waiting list, and a building for the accommodation of 200 additional patients was being erected. In 1867 Germany did some practical work for the care of epileptics; in 1890 Ohio established the first institution of the kind in this country; New York followed in

1894; and five other States had since established State institutions.

Reference was made to epilepsy as one of the oldest and strangest diseases in human history and one of the most difficult to study. This could only be satisfactorily done *en masse*. Epilepsy was defined as a disorder affecting the brain, characterized by remittent paroxysms which were violent in appearance, variable in duration, but generally short, and in which impairment or loss of consciousness, with impairment of mental coordination, with or without convulsions, was present. The old idea that an epileptic must have convulsions was a mistake. There were certain types of epilepsy in which motor coordination was destroyed, and yet in which the mind was perfectly unimpaired, notably in certain types of Jacksonian epilepsy. He enumerated the four chief forms of epilepsy as grand mal, petit mal, psychic, and Jacksonian. Of subdivisions, however, there were many. The day had gone by when the disease should be spoken of as epilepsy, the better expression being "epilepsies." The psychic form pure and simple was exceedingly rare; not more than one per cent. had this form to the exclusion of the other types, although many persons who had grand mal have also the psychic form. Only about two and one half per cent. of the Craig Colony patients had Jacksonian epilepsy pure and simple. Epilepsy had no regard for age; eighty-three per cent. of those in the Craig Colony had the disease before the age of twenty, and up to this age both sexes were equally affected; after twenty years of age the disease was more common in men. Heredity was said to play an important rôle, about fifteen per cent. of the cases under observation having been due to insanity in the father or mother and twelve per cent. to tuberculosis or similar disease in one parent. Of all the patients in the Colony, eight per cent. had the disease because of injury at birth. Dr. Spratling believed that in infantile palsies surgery would have a large field in the prevention of epilepsy. Brilliant achievements had already been attained. He did not believe that dentition was responsible for true epilepsy, but that difficult dentition in a child with bad heredity might be an exciting cause of convulsions, which convulsions, if uncared for, might develop true epilepsy.

More epilepsies were said to occur between the ages of twelve and sixteen than at any other period. In cases in which the seizures were grouped about the menstrual period, abdominal surgery had shown some good results. The next period of life in women when the seizures were most likely to occur was during the puerperal stage. Syphilis, alcoholism, and trauma were mentioned as potent causal factors in epilepsy in men of middle age. The prognosis of epilepsy was regarded as a difficult problem. A cure was not considered to be established until two years had elapsed with freedom from seizures.

An important principle in treatment was that of proper methods of life. The belief was expressed that when epilepsy was treated as broadly, rationally, and as persistently as cases of tuberculosis the same gratifying success would be secured. Dr. Spratling had no faith in prescribing bromides for epilepsy. He believed that the potassium bromide in selected cases had an influence for good, but he had never seen it cure epilepsy.

Biographs of Various Types of Epileptic Seizures.—Dr. WALTER G. CHASE, of Boston, in connection with Dr. Spratling's paper, gave a biographic exhibition showing the subjects passing through the entire seizure. The practical value of such reproduction in the instruction of students and physicians was obvious.

Dr. F. X. DERCUM showed some photographs which he had had taken some years ago portraying the successive phases of convulsions artificially induced.

Book Notices

The Real Triumph of Japan. The Conquest of the Silent Foe. By LOUIS LIVINGSTON SEAMAN, M. D., LL. D., late Surgeon Major, U. S. V. E., etc. New York: D. Appleton & Co., 1906. Pp. 291.

This very interesting book deals with the phenomenal success of the Japanese in the restriction of the great plagues of armies during their late war with Russia. The failure hitherto of other nations to approach this success is naturally brought prominently forward, and our own country does not show to advantage in the comparison. The picture ought to go far toward inducing Congress to make suitable provision for a better showing on our part in the future by strengthening the medical corps of the army and navy and, above all, by making the medical officers independent in all matters pertaining to the preservation of the men's health and lives, subject only to evident military necessity. Dr. Seaman has performed a conspicuous service to the country in demonstrating the utter inadequacy of popular and Congressional support of the well conceived plans of our army and navy medical corps. We hope the book will be widely read.

Verhandlungen der deutschen Röntgen-Gesellschaft. Verhandlungen und Berichte des ersten Kongresses zu Berlin vom 30 April bis 3 Mai, 1905. Hamburg: Lucas Gräfe and Sillem (Edmund Sillem), 1905. Pp. 248.

This volume gives the transactions of the Röntgen Congress held in commemoration of the tenth anniversary of the discovery of the x ray. The different papers read before the congress give a résumé of the present status of the x ray as a diagnostic and therapeutic agent. Some of the recent improvements in technics relate to the localization of foreign bodies and to the stereoscopic delineation of bones and joints. X ray procedures in dentistry and in the diagnosis of calculous and other conditions of the kidney and ureter are fully gone into. The importance of the x ray in the early diagnosis of pulmonary tuberculous disease, by revealing the presence of glandular masses in the mediastinum, forms the subject of one of the papers. One of the x ray demonstrations was that of two Egyptian mummies dating from about 2,800 years ago. The skulls are said to show an extraordinarily noble form.

Walters's article on the Measurement of the Quality and Intensity of the X Rays is a valuable one. Since the invention of the focus tube, in which the cathode stream is focused upon an anticathode or a platinum or other metallic disc near the centre of the tube from which the x ray originates, no radical invention has taken place in regard to x ray tubes. Later improvements have been in the direction of more easily regulating the degree of vacuum in the tube and in the construction of tubes made partly of lead glass, opaque to the x ray, the tube itself consequently limiting the application of the ray to a certain desired locality. The measurement of the intensity of the x ray most generally adopted depends upon the change in color which barium platinocyanide and certain other chemicals gradually undergo when exposed to the x ray, a certain change of color indicating the absorption of a definite quantity of x ray.

The treatment of disease by means of the x ray forms the subject of papers by Lassar, of Berlin; Alvers-Schoenberg, of Hamburg; Bouchacourt and Haret, of Paris; and Prio and Comas, of Barcelona, the conclusions being that the Röntgen rays undoubtedly have a favorable effect upon cancerous diseases, though in some cases it takes a long course of treatment, and there are cases, of course, which cannot be effectively reached by them. Dr. Sjoegren, of Stock-

holm, has an interesting article upon the prophylactic value of the x ray in the treatment of malignant tumors.

Normal and pathological mobility of the diaphragm can be observed by the Röntgen ray, and the observation assists in the diagnosis of many abdominal and thoracic conditions. The cardiac and aortic areas can be exactly studied, and such conditions as hypertrophy or dilatation of the heart and aneurysm of the aorta are susceptible of exact diagnosis. The heart area in mitral stenosis, insufficiency and stenosis of the mitral valve, the normal heart, the small heart in tuberculous patients, and the heart in aortic insufficiency are all characteristic. Tilden Brown's observation that repeated casual exposure to the x ray produces sterility furnished the text for one of the papers (by Hennecart, of Sedan) suggesting special legislation to restrict the employment of the x ray to those holding a degree of M. D. He fears that without such restriction it will become a means of race suicide in the hands of the unscrupulous.

The book affords a valuable record of present methods and results in Röntgen ray work.

Surgical Aspects of Digestive Disorders. By JAMES G. MUMFORD, M. D., Visiting Surgeon to the Massachusetts General Hospital. In Association with ARTHUR K. STONE, M. D., Physician to Out-Patients, Massachusetts General Hospital. New York: The MacMillan Company.

This is a book full of suggestive matter for the guidance of both physician and surgeon. Somewhat unusual in its arrangement, and including in its scope not only the stomach, but the liver, gall passages, pancreas, and appendix, it will repay a thoughtful perusal in this day of uncertainty about the meaning of much of the voluminous literature on digestive disorders. It is not by any means a book of surgical technics, although some operations are described; but the authors evidently intend to live up to the title by presenting the "aspects" of digestive disorders rather than a work on surgery. This is very fortunate, and the large number of cases studied and followed, the gathering of the statistics of others, and the frequent references to the best that is found in literature will be much appreciated. The surgical aspects of intestinal disease are not given a place, except as to the duodenum and appendix. There are a few illustrations of Finney's pyloroplasty, gastrojejunostomy, etc., and an appendix by Henry T. Hewes on *Diagnosis in Connection with Surgery of the Stomach*. The whole book is a credit to both authors and publisher, though we would suggest to the latter that uncut leaves are not suited to technical works.

Miscellany

Surgery of the Gallbladder and Its Ducts.—H. O. Walker (*St. Louis Medical Review*, October 2, 1905) details his experience with 125 cases in which he had operated. He states that (1) jaundice, which heretofore has been regarded as almost pathognomonic of the presence of gallstones, is present in only about twenty per cent. of all stone cases. (2) Pain in the region of the gallbladder does not by any means indicate the presence of gallstones, but is quite as often the result of a kinking of the cystic duct from lesions, the result of one or more attacks of cholecystitis combined with pericholecystitis. (3) The passage of stones in the fæces is not so common as was formerly supposed, for colics are rarely successful in passing a stone from the gallbladder. (4) Empyema of the gallbladder is not always determined by palpation, for frequent attacks of cholecystitis tend to diminish the size of the gallbladder. (5) Tumors of the gallbladder without pain or jaundice indicate a simple dropsy, while a painful, distended gallbladder indicates em-

pyema, and when accompanied by jaundice indicates constriction of the choledochus. (6) A hard nodular painful tumor of the gallbladder, with or without jaundice, is almost certainly carcinoma. (7) Obstruction and jaundice, quickly disappears after the passage of the stones into the papilla of the duodenum. Cholelithiasis, the author states, is of greater frequency than is supposed. Approximately every tenth individual has concretions in the gallbladder, yet only about one in twenty ever complains of their presence, so that quiet stones require no treatment. It is only the cholecystitis and cholangitis which make manifest the irritable presence of gallstones without demanding treatment, both medicinal and surgical. The conditions that require operative treatment are: (1) an acute seropurulent cholecystitis and accompanying pericholecystitis. (2) Persistent and frequent pains, due to adhesions between the gallbladder, intestines, stomach and omentum. (3) Chronic obstruction of the common duct. (4) Chronic empyema of the gallbladder and its accompanying accidents. Cholecystectomy is undoubtedly advisable where the gallbladder has been subject to frequent attacks of inflammation and where chronic septic conditions exist.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the week ended March 2, 1906:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
California—Los Angeles.	Feb. 10-17.	5	
California—San Francisco.	Feb. 10-17.	12	
Delaware—Wilmington.	Feb. 17-24.	1	
Dist. of Columbia—Washington.	Feb. 10-24.	9	1
Florida—Jacksonville.	Feb. 17-24.	5	
Kentucky—Covington.	Feb. 15-22.	1	
Louisiana—New Orleans.	Feb. 17-24.	11	
Maryland—Baltimore.	Feb. 17-24.	7	
Massachusetts—Boston.	Feb. 17-24.	1	
Michigan—Ann Arbor.	Feb. 17-24.	1	
Ohio—Cincinnati.	Feb. 16-23.	2	
Tennessee—Memphis.	Feb. 17-24.	1	1
Virginia—Petersburg.	Feb. 1-26.	17	
Wisconsin—Appleton.	Feb. 17-24.	2	
Wisconsin—Green Bay.	Feb. 17-24.	3	
Smallpox—Foreign.			
Africa—Cape Town.	Jan. 6-20.	10	
Canada—New Brunswick—King's County.	Feb. 18.	Present.	
Canada—New Brunswick—Quebec County.	Feb. 18.	Present.	
Canada—New Brunswick—Sunbury County.	Feb. 18.	Present.	
Canada—New Brunswick—York County.	Feb. 18.	Present.	
Canada—Toronto.	Feb. 10-17.	2	
Canada—Winnipeg.	Feb. 10-17.	1	
Chile—Iquique.	Jan. 20-27.		4
China—Shanghai.	Jan. 13-20.	1	1
Ecuador—Guayaquil.	Jan. 28-Feb. 4.		5
France—Paris.	Feb. 3-10.	11	
Gibraltar.	Feb. 4-11.	5	2
Great Britain—Bristol.	Feb. 3-10.	1	
Greece—Athens.	Jan. 22-Feb. 5.	5	
India—Bombay.	Jan. 23-30.		10
India—Calcutta.	Jan. 13-20.		55
India—Karnal.	Jan. 21-28.	9	3
India—Madras.	Jan. 20-26.		22
India—Rangoon.	Jan. 13-20.		38
Italy—General.	Feb. 1-8.		33
Italy—Rome.	Jan. 16-23.		1
Russia—Moscow.	Jan. 20-Feb. 3.	12	1
Russia—Odessa.	Feb. 3-10.	23	1
Russia—St. Petersburg.	Jan. 27-Feb. 3.	4	3
Spain—Barcelona.	Feb. 1-10.		2
Spain—San Sebastian.	Jan. 1-10.		11
Turkey—Alexandria.	Jan. 27-Feb. 3.	20	4
Turkey—Constantinople.	Jan. 28-Feb. 11.		11
Cholera.			
Cuba—Havana.	Feb. 11.	1	
Ecuador—Guayaquil.	Jan. 28-Feb. 4.		9
India—Calcutta.	Jan. 13-20.		43
India—Madras.	Jan. 20-26.		2

Phages				
General	Jan	13 20	4,652	3,938
Bombay	Jan	23 30		62
Calcutta	Jan	13 20		32
Karachi	Jan	21 28	7	6
India—Madras	Jan	20 26		3
Rangoon	Jan	13 20		23
Russia—Province of Astrakhan	Dec	25 Jan	2	8

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending February 22, 1906.

BURKHALTER, J. T., Passed Assistant Surgeon. Upon being relieved by Assistant Surgeon R. D. Spratt to proceed to Ellis Island, N. Y., reporting to the Medical Officer in Command for duty.

COFER, L. N., Passed Assistant Surgeon. Granted one day leave of absence under Paragraph 189 of the Regulations.

DELGADO, J. M., Acting Assistant Surgeon. Granted four days' leave of absence from February 13, 1906, under Paragraph 210 of the Regulations.

KORN, W. A., Passed Assistant Surgeon. Granted leave of absence for fourteen days from March 2, 1906.

KURTZ, W. E., Acting Assistant Surgeon. Granted leave of absence for thirty days from January 1, 1906, on account of sickness.

LONG, J. D., Passed Assistant Surgeon. Granted seven days' leave of absence in December, 1905, under Paragraph 191 of the Regulations.

MAGRUDER, O. N., Surgeon. Upon expiration of leave of absence to proceed to Portland, Ore., and assume command of the service.

NYDEGGER, J. A., Passed Assistant Surgeon. To proceed to Perth Amboy, N. J., for special temporary duty, upon completion of which to rejoin station at Stapleton, N. Y.

O'GORMAN, T. V., Pharmacist. Relieved from duty at New Orleans, La., and directed to proceed to Memphis, Tenn., reporting to the Medical Officer in Command for duty and assignment to quarters.

PETTUS, W. J., Assistant Surgeon General. Granted leave of absence for one month from March 1, 1906.

RICHARDSON, N. D., Acting Assistant Surgeon. Granted leave of absence for fourteen days from January 27, 1906, on account of sickness.

SAFFORD, M. V., Acting Assistant Surgeon. Granted three days' leave of absence from February 17, 1906, under Paragraph 210 of the Regulations.

SCOTT, E. B., Pharmacist. Granted two days' leave of absence from February 21, 1906, under Paragraph 210 of the Regulations.

SPRATT, R. D., Assistant Surgeon. Relieved from temporary duty at Mobile, Ala., and directed to proceed to Brunswick Quarantine Station and assume command of the Service, relieving Passed Assistant Surgeon J. T. Burkhalter.

Board Convened.

Board convened to meet at the Bureau, Washington, D. C., February 24, 1906, for the purpose of making a physical examination of an officer of the Revenue Cutter Service. Detail for the board: Assistant Surgeon General W. J. Pettus, chairman; Assistant Surgeon J. W. Trask, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending March 3, 1906:

KIRKPATRICK, THOMAS J., Captain and Assistant Surgeon. Granted thirty days' leave of absence. Reported for treatment at the Army General Hospital, Washington Barracks, D. C.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending March 3, 1906:

CHAPPELEAR, F. D., Acting Assistant Surgeon. Appointed an acting assistant surgeon from February 28, 1906.

FIELD, J. G., Surgeon. Ordered to the Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

NASH, F. S., Surgeon. Detached from the *Oregon* and ordered to the *Rainbow*.

Births, Marriages, and Deaths.

Married.

BIELLO—DE LUCA.—In Philadelphia, on Thursday, February 22nd, Dr. Joseph A. Biello and Miss Marie T. De Luca.

BUIST—RICHARDSON.—In Brooklyn, N. Y., on Tuesday, February 27th, Dr. George Lamb Buist, Jr., and Miss Adelaide Richardson.

CRECELIUS—TURNER.—In Norwalk, Ohio, on Thursday, February 22d, Dr. Edward W. Crecelius and Miss Bertha Turner.

LEVY—ROSENSTEIN.—In Lancaster, Pennsylvania, on Thursday, February 22nd, Dr. I. Valentine Levy, of Philadelphia, and Miss Helene Rosenstein.

MAGUIRE—McCULLOCH.—In Minneapolis, on Wednesday, February 21st, Dr. John B. Maguire and Miss Marian McCulloch.

REYNOLDS—CHILDS.—In Los Angeles, California, on Wednesday, February 21st, Dr. Frederick Pratt Reynolds, United States Army, and Miss Hortense Cecilia Childs.

Died.

ALLHANDS.—In Louisville, Kentucky, on Friday, February 23rd, Dr. D. S. Allhands, aged seventy-three years.

BLAKE.—In Springfield, Massachusetts, on Thursday, February 15th, Dr. Warren P. Blake, aged forty-seven years.

BOLTON.—In Philadelphia, on Saturday, February 24th, Dr. Joseph P. Bolton.

BREITENBACH.—In Philadelphia, on Tuesday, February 27th, Dr. Samuel Breitenbach, aged eighty years.

BROOKS.—In Springfield, Massachusetts, on Monday, February 26th, Dr. Samuel Doolittle Brooks, aged eighty-nine years.

CHERRY.—In Boston, on Wednesday, February 21st, Dr. James B. Cherry, aged sixty-two years.

COATES.—In Milwaukee, on Thursday, February 22nd, Dr. John T. Coates, aged sixty-five years.

COLE.—In Wheeling, West Virginia, on Saturday, February 24th, Dr. C. C. Cole, of Bridgeport, Ohio, aged thirty-seven years.

DRAKE.—In New York, on Thursday, March 1st, Dr. William F. Drake.

DUBOIS.—In Millersville, Maryland, on Monday, February 19th, Dr. Jacob W. Dubois, aged seventy-three years.

GEER.—In Baltimore, on Sunday, February 25th, Dr. Edwin Geer, aged forty-one years.

GILBERT.—In Atlanta, Georgia, on Thursday, February 22nd, Dr. Augustus Lathrop Gilbert, aged eighty-one years.

HAYNES.—In Cohoes, N. Y., on Friday, February 23rd, Dr. John Udolpho Haynes, aged fifty-six years.

HILS.—In Woonsocket, Rhode Island, on Friday, February 23rd, Dr. Joseph Hils, aged fifty-six years.

LONG.—In Kansas City, Missouri, on Thursday, February 22nd, Dr. Charles W. Long, of Neodesha, Kansas.

NORTH.—In St. Louis, on Tuesday, February 20th, Dr. Francis E. North, of Taylorville, Illinois, aged twenty-nine years.

PETERMAN.—In Detroit, Michigan, on Friday, February 23rd, Dr. Hiram A. Peterman, aged eighty-four years.

PURCELL.—In Mechanicsville, N. Y., on Monday, February 26th, Margaret M. Purcell, wife of Dr. James M. Purcell, aged thirty-four years.

SPRAY.—In Chicago, on Tuesday, February 20th, Dr. John C. Spray, aged sixty years.

VOLKER.—In St. Louis, on Thursday, February 22nd, Dr. R. C. Volker, aged sixty-seven years.

WELLS.—In Brooklyn, N. Y., on Monday, February 26th, Dr. Joseph Edgar Wells, aged forty-one years.

New York Medical Journal

INCORPORATING THE

Philadelphia Medical Journal and The Medical News

A Weekly Review of Medicine

VOL. LXXXIII, No. II.

NEW YORK, MARCH 17, 1906.

WHOLE No. 1424.

Original Communications.

SURGICAL INTERVENTION IN BENIGN GASTRIC LESIONS.*

By ANDREW J. McCOSH, M. D.,

NEW YORK.

The mysteries of parametritis and perimetritis were dispelled not at the autopsy table, or at the bedside, but in the operating room by the courageous and skilful Lawson Tait. Likewise the obscurities of perityphilitis have been cleared up by the pioneer operators for the disease so clearly described and named by Fitz as appendicitis. Through such men as Parker, Sands, and McBurney, and in the past decade by the observations of numerous gastric operations a flood of light has been cast upon many obscure symptoms, which were formerly classed under gastralgia, nervous dyspepsia, atonic dyspepsia, or perhaps hysteria, but which we now realize are often due to distinct lesions of the stomach. It has been well said that the chapters upon many of the diseases of the stomach must be rewritten, if internists wish to keep step with progressive modern views.

As the result of modern gastric surgery, the following conclusions have been logically reached:

1. That many gastric symptoms formerly considered as purely functional are caused by distinct anatomical conditions or pathological lesions.

2. That for diagnostic purposes the stagnation test is of much greater value than is any chemical examination of stomach contents.

3. That spasmodic pyloric contraction frequently occurs as the result of derangement of gastric secretion or abrasions of the mucous membrane of the stomach and duodenum.

4. That gastric hæmorrhage frequently occurs without the existence of the typical round ulcer, the bleeding emanating from minute abraded spots or cracks, which may be scattered about throughout a patch of intensely congested mucous membrane.

5. That not uncommonly, large inflammatory masses, constituting a palpable tumor, may exist, caused by and surrounding an ulcer. Formerly such masses were considered malignant. In many, a gastroenterostomy was done, and a fatal end, in the course of a year or so, prophesied. We now encounter some of these patients in a perfect state of health many years later, with complete disappearance of the mass. Based upon such an experience, we can now

generally at the time of operation, arrive at a correct diagnosis of the character of these masses.

6. That duodenal ulcers are of frequent occurrence. While less common than gastric, they yet are now supposed to exist in the proportion toward the latter of 1 to 3. This at least is the view held by the operators. We must, however, remember that, as Dr. Abraham Jacobi has so wisely stated, neither specialists, hospital surgeons nor even hospital physicians are the best judges of either the frequency or curability of ulcers of the intestinal tract.

7. That in the great majority of cases of contracted pylorus, whether it be due to pylorus spasm, inflammatory hyperplasia of the circular muscular fibres, or stricture with adhesion from an ulcer, a gastroenterostomy will effect a cure, or at least markedly relieve the symptoms.

8. That in a long series of cases, the mortality of this operation should not be over five per cent., provided that through neglect, the patients have not been allowed, by so called conservative treatment, to drift into a semimoribund condition.

9. That, in cases of simple dilatation with atrophy of the stomach without constriction of the pylorus, a gastroenterostomy will generally fail to cure the patient.

10. That, following gastric operations, there must be, if we strive for perfect results, continuous dietetic and hygienic treatment, extending over months or even years. Common sense should tell us this, but I have so often encountered great disappointment, because at the end of two or three months after a gastroenterostomy the patient could not eat a Christmas dinner, that I feel it wise to warn physician and patient, that after treatment is a necessity, just as it is after division of a stricture of the urethra, rectum or œsophagus.

In our fervor for gastric operations encouraged by many brilliant results, we must not be led on to operate indiscriminately on all the patients who seek surgical aid. Our cases must be carefully selected. Medical, dietetic, and hygienic treatment should have fair and judicious trial, perhaps aided by a change of air and scene. The surgeon should be loath to exercise snap judgment; patients should generally be under his own personal observation for some time before he decides on operative interference. He must be careful to reject the purely neurasthenic, the operative monomaniacs, the poor specimens of humanity of both sexes with general enteroptosis, weakened abdominal ligaments and atonic, hollow viscera. False hope should not be given such pa-

* Read at the one hundredth anniversary of the Medical Society of the County of Dutchess, January 10, 1906.

tients, and operations on patients of this type can only bring discredit on gastric surgery.

Decision as to the proper treatment in this class of patient is most difficult, and we should be fortified by close observation and accurate examinations before we consent to operate. On the other hand we must be equally careful not to allow medical treatment to be prolonged to a point where pain and starvation have reduced the patient to a condition which renders any operation hazardous. Such in past years has been often the result of the plan of treatment followed. I am sorry to say that even yet, in this part of the country, at least, operation is often postponed until the patient himself demands surgical relief.

I am glad to say, however, that many of our medical men are now recommending more frequent resort to surgery. The men who have not changed their methods of treatment are mainly those whose judgments have been formed from the results of gastric operations done half a dozen years ago. One does not wonder that they hesitate to advise frequent operation, when one considers those results. Gastric surgery was then in a more or less experimental stage, and the indications for operation, and for the particular type of operation, were rather vague and unsatisfactory. The past two years have, however, changed all this. We can now give fairly definite indications both for operation and for its type. We can generally foretell what will be the result of operation as regards alleviation of the symptoms, and we can assure the physician, as well as the patient, that the operative risk should be under five per cent., unless he has, by his own conservatism, scepticism or whatever you may please to call his dilatory tactics, allowed his patient to pass beyond the border line of safety.

Did time permit, I would gladly dwell more extensively on many of the operative indications, as well as on the operative details. I will, however, say but a word or two about some of the conclusions just stated. The second of my conclusions in regard to stomach examinations should especially interest this assembly made up largely of busy practitioners, full of intelligence and common sense, and whose access to a chemical laboratory is not always easy. The chemical examination for free hydrochloric and lactic acids is always interesting and sometimes instructive, but the exceptions to the rules are so common, as to deprive the analysis of any but corroborative value. The stagnation test, on the other hand, is always practicable, and generally very valid. An ordinary meal should have passed out of the stomach into the duodenum in five hours. Give the patient an extra hour, and then insert a stomach tube and wash out the stomach contents. If much undigested food remains, this must mean sluggishness of the gastric digestion. In this case, try again, waiting ten hours after an ordinary dinner. If food detritus still remains, we must conclude that there is stomach stagnation. We must, however, use some caution in employing this test. In a nervous patient, the thought of lavage may retard digestion, as may any other severe mental anxiety. It is better, then, to seize the patient unawares, and to choose an occasion when the day will be free from unusual care or anxiety. If stagnation is found to exist the question will then arise as to its cause. Is

it an atonic dilated stomach with poor musculature? Is it a spasm of the pylorus, due to some irritative condition of the gastric or duodenal mucous membrane or secretion? Is it a distinct thickening with hyperplasia of the muscular fibres of the pylorus? Is it a pylorus contracted by cicatricial tissue due to an ulcer of that region? Is it peritoneal adhesions which kink the pyloric opening? Or is it cancer of the pylorus? All of these causes except the first one mentioned can be generally remedied by means of an operation, so that a distinct definition of the pyloric obstruction is not of such great importance, except to exclude cases of simple atonic dilatation. The history and physical examination, with perhaps examination of stomach contents and stools, will, however, often enable us to differentiate between the different varieties of pyloric obstruction.

The operative risk of gastroenterostomy in benign cases, as already stated, is about five per cent. This is the risk of operations done by skillful surgeons during the past year or two. Previous to that time ten per cent. to fifteen per cent. was the truer figure. This, in part, was due to the poor condition of the patients, who were sent generally as a last resort, to the surgeon, and partly to our lack of knowledge of the best plan of operation. At the present day many patients come of their own accord to the surgeon, many physicians are now inclined to advise early operation in intractable cases, and our operative technics is vastly improved as the result of early failures. As an example, in my own experience in gastroenterostomies done on thirty three private patients, my mortality has been nil. In my hospital ward cases, on the other hand, my mortality has been about fourteen per cent. Half of the latter cases were semimoribund when referred to the operator. Happily, the proportion of such neglected patients is yearly becoming smaller.

The time allotted allows but this very general review, of this interesting topic, which is probably the most important in present day surgery. I hope, however, that it may suggest the propriety of persuading many of our so called dyspeptics, to submit to operative relief, and at the same time the impropriety of sending all cases of persistent dyspepsia to the surgeon.

16 EAST FIFTY-FOURTH STREET.

ÆTIOLOGY OF ACUTE ARTICULAR RHEUMATISM.*

By RUFUS I. COLE, M. D.,
BALTIMORE,

ASSOCIATE IN MEDICINE, THE JOHNS HOPKINS UNIVERSITY.

One hesitates to undertake the review of this subject for fear that a consideration of the many hypotheses that have been advanced, and the many apparently reliable discoveries reported, may only make "confusion worse confounded," and contribute very little to clearness of insight.

There are several reasons why the ætiology of this rather common disease is still so obscure. The first is dependent upon the indefinite nature of the clinical manifestations. There are no certain and constant clinical or pathological features. In the ex-

* Read before the Clinical Section of the Medical and Surgical Faculty of Maryland, meeting of January 5, 1906.

anthemata there are the characteristic rashes, in malaria the characteristic pyrexia, in typhoid fever the intestinal lesions, etc., by which, even before the discovery of the ætiological agent, the accurate distinction (clinical or pathological) was rendered possible. With rheumatism our conception of the disease has had to rest almost entirely on clinical features, owing to the fact that death is comparatively rare, and therefore the opportunity for pathological study has been limited, while that which has been undertaken has not revealed any constant, specific lesions.

On the other hand, what clinical features may we say are specific and characteristic? All recognize the typical cases, on which our conception of the clinical entity is based. The polyarthritides, the moderate or high fever, the migratory character of the joint affection, the profuse sweating, the mild cardiac involvement, etc., seem at first sight to distinguish this condition quite clearly. But when we leave these typical cases and contemplate the atypical ones, it is not to be wondered that many men refuse to believe that acute articular rheumatism is a specific disease. Almost all of us must have seen cases that we have called acute articular rheumatism in which the joint lesions were very mild, even entirely absent. A child has a little fever, may be a tonsillitis, a faint murmur develops over the heart, perhaps if we examine carefully we find an erythema or a few subcutaneous fibroid nodules, or there may be a mild iritis, but all this passes away and we are in doubt as to the condition which has been present. Again we see a patient with acute polyarthritides. The sweating may be marked. The features are quite characteristic those of acute articular rheumatism—there may even be a simple endocarditis. We watch the patient, however, for several weeks; the joints do not recover as rapidly as we expect, there is found to be a little stiffness, the muscular atrophy becomes more marked, we say we have made a mistake, it was not acute articular rheumatism, but the acute stage of arthritis deformans. A patient comes with fever, with swelling of several joints, moderate leucocytosis, some sweating, we make a diagnosis of acute articular rheumatism, give a few doses of salicylates and in a few days the patient is well. Another case with the same features comes and we again give salicylates, but still there remain one or two joints quite swollen and red. We now begin to be a little worried, we aspirate and find turbid fluid in the joints, and on examination we find streptococci or gonococci present. We now say we have made a mistake, our case is one of gonorrhœal or streptococcus arthritis.

Probably many will say that between gonorrhœal arthritis and acute articular rheumatism there should be no difficulty in differentiating. One should say between the textbook descriptions of the typical cases there should be no trouble. But there is a vast difference between composite pictures and individual cases. On going over fifty of our cases of gonorrhœal arthritis in the Johns Hopkins hospital, in all but three polyarthritides was present. In certain of the cases only the history of the occurrence of an associated attack of urethritis, or the isolation of gonococci from the affected joint, made a positive differentiation from acute articular rheumatism possible.

I have spent considerable time bringing out some of the uncertainties which must come before us in our consideration as to whether acute articular rheumatism is a specific disease entity or not. This has been done because we cannot properly weigh possibilities, as this paper attempts to do, unless we keep in mind both sides of the question.

Chvostek has gone so far as to say that "a differentiation of the so called genuine articular rheumatism from pseudorheumatism and rheumatoid affections is not possible. The small group of cases in which we do not know the ætiological agent or its portal of entry, and which for this reason we group together as a single disease, becomes more and more limited, and the time is possibly not far distant when acute articular rheumatism as a specific disease will reach its well deserved end." This is an extreme standpoint, one which clinicians cannot accept, and yet we must not entirely disregard it.

There have been many hypotheses as to the ætiology of the condition known as acute articular rheumatism. It probably would not be of much interest or profit to recount all of these, most of them based mainly on library theorizing, a few of them based on slight clinical or experimental evidence. As the name indicates, this disease was at first considered a catarrh of the joints, though this conception does not give us much ætiological aid. Soon it was thought to be directly due to the effect on the joints of cold or sudden changes of temperature. In 1831 Dr. J. K. Mitchell, of Philadelphia, advanced the view that the seat of the disease was in the spinal cord, the chief evidence resting on numerous cases of cure following cupping over the lumbar spine, if the joints of the lower extremities were involved, over the cervical or dorsal spine if the joints of the upper extremities were involved. There have been many modifications of this theory, some most bizarre. Even the exact seat of the disease in the central nervous system has been localized, in a hypothetical joint centre. Probably a mistaken analogy with the trophic joint disturbances as seen in tabes has had much to do with the promulgation of this theory.

Owing to the superficial resemblance of certain cases to gout, the view that the lesions are due to the irritation of chemical substances has been advanced, especially by the English writers. Fuller in 1852 put forward the view that this substance is lactic acid. This view has given rise to an immense amount of experimentation and collection of clinical evidence for and against, and was largely responsible for the form of treatment, still largely employed, the use of alkalies. Latham and others have maintained that uric acid is the guilty substance. Bell and others have claimed that the cause lies in the putrefactive substances absorbed from an inactive intestine. To-day practically all those who have examined carefully into the evidence in favor of these various views pronounce it insufficient, and these theories play little part in the present conception of the disease.

With the discovery of the rôle of bacteria in the various disease processes it was quickly noted in how many particulars acute articular rheumatism resembled the infectious diseases. The course of the febrile attack, the tendency to spontaneous recovery, the multiplicity of the lesions, etc., all led to

the promulgation of the view that acute articular rheumatism is infectious in origin. It is of special interest to note that the great similarity of rheumatic fever to the general pyogenic infections, "septicopyæmia," led Wagner and others to believe in this view. These cases of streptococcus or staphylococcus septicæmia, especially the so called cryptogenetic form with continued fever and sweating, tendency to involvement of the joints, and of the endocardium and pericardium, it must be admitted, greatly resemble rheumatic fever, though they differ in details, such as the degree of intensity of the local lesion, the tendency to suppuration, etc.

Evidence as to the possibility of contagion in rheumatism (Jussereau, *Thèse de Paris*, 1905, No. 507) is not wanting, though one must admit that it is not very convincing. Friedländer went so far as to isolate the cases of rheumatism in the hospital at Leipzig. The local distribution of rheumatism cases, the greater frequency at certain seasons of the year, the greater frequency in certain years, the so called epidemics of rheumatism, the occurrence of so called rheumatic houses, which have been long described, all speak for the possibility of contagion. It must be borne in mind, however, that undoubtedly cold, humidity and exposure play secondary rôles in the ætiology of this disease just as they do in pneumonia, and to these factors may be due many of the apparent cases of contagion. The evidence of the occurrence of direct contagion, however, has no necessary place in the consideration of the infectious nature of the malady.

The attempts to discover the nature of the infectious agent have been fairly numerous, but the difficulties in the solution of this problem are great. In the first place, on account of the low mortality, cultures can rarely be made post mortem. When opportunities do arise one cannot be sure that secondary terminal infections have not occurred. During life the comparatively mild nature of the joint inflammation gives no reason for operative procedures. The main study must be made of fluids aspirated from the joints, or of the blood or excretions of the patient.

The fairly mild character of the joint involvement and the simple character of the endocardial lesions would not lead one to expect that the ætiological agent would occur in very large numbers in the blood or excretions. So, too, we must recognize that making cultures from the fluids aspirated from the joints is not a very satisfactory method. We have lately seen a severe case of gonorrhœal arthritis in which absolutely no organisms could be demonstrated in the aspirated fluid, either in cultures or on cover slips. The joint was opened at once, however, and smears made from one of the injected villi revealed myriads of gonococci. During the past three years cultures have been made from the blood and joints in practically all of the cases of acute rheumatism in the Johns Hopkins Hospital, but in no case of typical acute rheumatic fever have we succeeded in isolating any organism. Similar results have been obtained in the clinic of Professor Pribram, by Philip and by others. For the above mentioned reasons, however, we cannot feel that the failure to find organisms in the joint fluids is absolute proof that bacteria are not present. We must also bear in mind

the possibility that the infecting organism may be one which we are unable to cultivate by our present known methods. On the other hand, certain observers have obtained bacteria in cultures made from the blood, or joints, or heart valves of rheumatic fever patients.

We may leave out of consideration the unconfirmed reports of earlier observers who reported the cultivation of bacilli from the joints. These were undoubtedly contaminations, that of Achalmé almost certainly so. Several observers, as Singer, Sahli, and others, have reported the isolation of *Staphylococcus albus* or *aureus* from the rheumatic fever patients in isolated instances. At present, however, the main attention is being paid to the reports of the finding of diplococci or streptococci in the blood, joints, or heart valves of patients with this disease. I will not weary you with a list of these various observers, but may say that reports appear from German, French, and English observers and from Longcope in this country. During the past few years the principal reports have been from England, Dr. Poynton and Dr. Paine having made the most extensive and recent contributions to the literature.

In the critical consideration of all this work we must keep certain possibilities in mind.

(1) Were these organisms obtained from true cases of acute rheumatism—was the diagnosis correct? We have previously considered the difficulties in the way of coming to a conclusion as to just what in the individual case we shall call acute articular rheumatism. The following case illustrates the difficulties:

A patient, a barber, aged fifty, was admitted with hemiplegia. Five or six years before he began to have "heart trouble." For a year or more he had suffered with what he called "rheumatic pains." Four weeks before admission he began to have swelling and pains in his joints. Shortly afterwards he became irrational and had a sudden attack of hemiplegia. He was found to have aortic and mitral insufficiency. Cultures from the blood were made and a pure culture of *Streptococcus pyogenes* isolated. Four more blood cultures with similar results were made before death occurred, 20 days later.

In this case, although there was a history of arthritis, with cardiac involvement, the general features did not seem to us to be those of uncomplicated rheumatic fever and we did not consider it as such. Nevertheless a considerable number of the cases from which cocci have been cultivated have been of this type, and Poynton and Paine in a recent paper, in discussing my article in which the case given above was quoted in full, speak of this case as one of rheumatic fever.

(2) Where cultures are made at autopsy the possibility of a terminal or secondary infection must be borne in mind. In other acute infections streptococci play a very important part in the mortality. If the presence of streptococci in the blood at autopsy were proof of the ætiological relationship of this organism, we would have abundant proof that both smallpox and scarlet fever are due to streptococci. It would certainly not be unexpected in a condition associated with a simple endocarditis that an acute malignant streptococcus endocarditis should be a terminal event.

(3) The possibility of preagonal and agonal in-

vasion must be borne in mind, though this invasion by streptococci is much less frequent than by certain other organisms, but undoubtedly does occur.

(4) That in making cultures from the joints and tissues contaminations sometimes occur.

But keeping all the possibilities in mind one must say, from a review of the literature, that there can be no doubt that in certain cases of quite typical acute articular rheumatism, cocci, growing in pairs or chains, have been isolated from the joints and blood during life, or from the heart valves after death.

The important point at once arises, are these specific diplococci or are they ordinary streptococci? The English observers in general have maintained that they are specific organisms, to which certain of the writers have given the name *Diplococcus rheumaticus*. A careful study of all their work, however, has shown that this claim for specificity rests on no cultural or morphological grounds, but on the fact that when injected into rabbits or monkeys these organisms produce multiple arthritis of variable grades of intensity, in some cases endocarditis and pericarditis and in a few experiments a condition said by the writers to resemble chorea.

Without going into the details of some work¹ published last year and with which possibly some of you are familiar, it may be said that, starting with the streptococcus isolated from the case previously mentioned, I studied the effects of the injection into rabbits of seven different races of streptococci, obtained from various sources, but none of them from rheumatic fever cases. From this work it was concluded that "arthritis and endocarditis may be produced by the intravenous inoculation of rabbits with streptococci from various sources, and the results obtained are quite similar to those described as resulting from the inoculation of the so called *Micrococcus* or *Diplococcus rheumaticus*. Therefore the description of a distinct variety or species of streptococci, based on this property of causing endocarditis and arthritis, is unwarranted." It should be mentioned, however, that Professor Ainley Walker has shown that in cultures of the micrococcus isolated by him from a case of rheumatic fever, formic acid is found in very considerable quantities. He states, however, that ordinary streptococci also give rise to formic acid, but only in small quantities.

Further work has not yet been done on this acid test, and it may possibly shed some light on the subject. It is much to be doubted, however, whether this test, which will have to be a quantitative and not a qualitative one, will have much value in the study of an organism so notoriously variable as streptococcus.

Dr. Poynton and Dr. Paine still maintain, however, that there is a specific diplococcus which is the ætiological agent in acute rheumatic fever, which disease they regard as a specific infection. They have gone over the whole question quite fully in the *Lancet* of December 16, 1905. I should like to quote very briefly some of the statements there made. As to the suitable cases in which to isolate the organism they state: "These are acute and severe ones, in which the lining membranes of the serous cavities are greatly damaged, or in which the type is malig-

nant. Serofibrinous pericarditis and malignant cases of rheumatic endocarditis are excellent examples." From this and other statements it seems to me that the conception of acute articular rheumatism by these English observers is somewhat different from that held here. If we hold the view that we may include among our cases of acute articular rheumatism those cases of malignant endocarditis from which organisms are isolated which, so far as we have at present any means of determining, are identical with streptococcus pyogenes, and if we say that these cases differ only in degree from the more mild cases of acute articular rheumatism, I do not see how we can refuse admitting that this disease is only a form of streptococcus septicæmia. We certainly know that streptococci may cause many different conditions. Facial erysipelas is a very clear cut clinical entity, yet it is caused by streptococci which differ in no known way from those causing an osteomyelitis or a local abscess.

There have been lately in the Johns Hopkins Hospital two cases which are of very great interest in this connection.

A colored girl, aged twenty-one, was admitted to the Johns Hopkins Hospital on August 14, 1905, complaining of pain in the joints. She had never previously had rheumatism. Four weeks before admission she noticed pain in the left elbow; then in succession a phalangeal joint, the right wrist, right elbow, right shoulder and left ankle became involved. On admission the right shoulder and left elbow were very tender, but there was no redness or swelling. There was marked swelling, however, over the left ankle and dorsum of the foot. The skin over it was red and hot and there was marked tenderness on pressure. On examination an acute urethritis was found, the discharge from which contained a very few intracellular diplococci which were decolorized by Gram's method. The condition was therefore considered most probably one of gonorrhœal arthritis.

Three days after admission the left knee joint became swollen. This gradually became more marked and the pain more severe. Aspiration was performed and 15 c.c. of turbid fluid were removed. This fluid contained many pus cells but no cocci could be found. Cultures, however, made from this fluid by Dr. Howard showed, not gonococci as was expected, but a pure growth of streptococci.

As the inflammation of the joint on the following day was more marked the patient was transferred to the surgical side and the joint was opened and irrigated. There was no further involvement of any of the other joints. There was no more fever, the wound healed perfectly, and three weeks after the operation the patient walked out of the hospital well, with practically no pain and no restriction of motion in the joint.

Here was a case of polyarthritis of mild grade with marked effusion into only one joint, with streptococci cultivated from this joint, and rapid and complete recovery.

A second patient, a colored girl, aged nineteen, was admitted to the Johns Hopkins Hospital on September 13, 1905, complaining of aching in both knees and in the right elbow. For several years she had had what she called a "touch of rheumatism" in the right knee. Eleven days before admission she began to have fever and pain in the left shoulder. Following this other joints became involved, the left wrist and carpometacarpal joints, the right shoulder, wrist and right carpometacarpal joints. Later both knees became red and swollen and painful. Each joint remained sore

¹ *Journal of Infectious Diseases*, Vol. 1, p. 714, 1904.

and swollen for three or four days, with gradual recovery. She felt chilly at times and sweated much at night. A physician whom she saw pronounced the condition acute articular rheumatism.

On admission it was found that the right wrist was swollen, hot and acutely tender, also the metacarpophalangeal joint of the right thumb, the right shoulder, the left elbow and the left ankle. There was slight effusion into both knee joints, and they were quite painful. The temperature was slightly elevated, pulse rapid. She continued to have some fever but there was gradual improvement in the joints. On September 19, for the first time, swelling, redness and pain of the right ankle were noted. Sodium salicylate was given and there was gradual improvement in all the joints, except the left wrist, over which a well-marked local swelling gradually developed, and on October 7 this was aspirated, about 1 c.c. of turbid fluid being obtained. Smears made from this fluid showed many pus cells and fairly numerous diplococci which retained Gram's stain. Cultures however from this fluid were negative. Two days later, the swelling persisting, aspiration was again performed and 4 c.c. of turbid fluid obtained. Smears again showed pus cells and a few Gram staining diplococci. Cultures made from this fluid by Dr. Howard showed a pure growth of *Streptococcus pyogenes*, which in morphological and cultural characteristics could not be differentiated from ordinary streptococci. Following this aspiration the swelling gradually disappeared. There was no further involvement of any of the other joints, and the patient made a complete recovery.

This case is of very great interest. At first we did not hesitate to call it one of acute articular rheumatism. The persistence of the swelling in one joint, however, made us suspect that it was one of gonorrhœal arthritis, though there were no signs of inflammation of the genitalia.

How are we to explain the presence of streptococci in the joint aspirated? Was the case one of acute articular rheumatism with a secondary infection of one joint? Or was the entire condition one of streptococcus infection? If so how are we to differentiate it from acute articular rheumatism? Both of these cases, certainly the second one, are like those reported by the English observers as examples of rheumatic fever, from which they have cultivated streptococci.

Taking as critical an attitude as possible, these cases are of very great interest as demonstrating that streptococci may induce a polyarthritis of very moderate grade. Whether this differs essentially from acute rheumatism or not, we are not yet in a position to say.

The chief point, as I understand it, that Poynton and Paine make, is that rheumatic fever, having unusual clinical features, must have a specific cause, and therefore it cannot be due to *Streptococcus pyogenes*. As, however, streptococci seem to bear an ætiological rôle, there must of necessity be some difference between these streptococci found in rheumatism and those found in other conditions, even though we have no method of detecting these differences.

But is it necessary that there are differences in the streptococci, may not the differences be in the patients? Is it too much to believe that streptococci invading one patient may produce a septicæmia of the type usually recognized, and invading another patient produce acute articular rheumatism? In fact, may it not be that acute articular rheumatism

is the common sort of general streptococcus infection in man, and the so called streptococcus septicæmia or pyæmia occur only when there is markedly lowered resistance? We consider that pneumococci cause acute lobar pneumonia as well as general septicæmia, otitis media, and many local infections.

There is one fact which seems to point to streptococci or very closely related organisms as the cause of rheumatic fever. There are several diseases in which one attack predisposes to another: instead of immunity there follows heightened susceptibility. Among these diseases are erysipelas, tonsillitis, pneumonia, and rheumatism. The very close relation of pneumococcus to streptococcus is now well recognized. While probably of no special value in arriving at a definite conclusion, this association of these four diseases is of interest.

I greatly fear that we are not yet in a position to make any positive statements as to the ætiology of this disease. It seems to me that there are at least three possibilities. First, that acute articular rheumatism is a definite, specific, infectious disease, the cause of which we do not know, and that the cocci which have been isolated were secondary invaders. Second, that there is no such specific disease as acute articular rheumatism, but that the cases grouped under this term are those mild and moderately severe cases of general streptococcus infection in which the joints and heart are generally involved. Third, that acute articular rheumatism is due to a special form of streptococcus, which at present we have no accurate method of distinguishing from *Streptococcus pyogenes*, but which, owing to the specific character of the lesions induced in man, must possess special characteristics. The last is the view held by many of the English observers.

We feel that at present there is little justification for speaking of *Micrococcus rheumaticus* which causes acute articular rheumatism any more than there is justification for speaking of *Micrococcus erysipelatos*, or of ordinary *Diplococcus pneumoniae*, differing from the ordinary *Micrococcus lanceolatus* which causes a great variety of infections.

Possibly further study may show that the streptococci isolated from rheumatic fever cases have special features, just as it may possibly be shown that pneumococci which induce acute lobar pneumonia differ from other forms. Further work, however, is required before this can be granted, and this proof will have to be more complete than the mere demonstration of differences in degree of experimental lesions produced in animals. At any rate, these differences will have to be constant.

CAUSES AND CURE OF CANCER AND SOME OF THE CAUSES OF FAILURE IN TREATING MALIGNANT GROWTHS BY X RAYS AND ELECTRIC CURRENTS.

By ROBERT REYBURN, A. M., M. D.,

WASHINGTON, D. C.,

DEAN OF MEDICAL DEPARTMENT, HOWARD UNIVERSITY.

It may be advisable before entering upon the description of the causes of failure in treating these growths briefly to refer to the causes of cancer.

The first and probably the most powerful predis-

posing cause of cancer is senility, or old age, of the tissues and organs of the body. An apparently formidable objection will be at once made to the above statement by citing the well known fact that cancer is found in young persons, and is sometimes, though rarely, congenital. Whilst this is perfectly true yet it should be remembered that senility is only a comparative term. Many persons are practically as old in their tissues at twenty or thirty years of age as others are at sixty. The real test of old age is not the number of years the person has lived, but the retrograde metamorphosis and degradation which has taken place in the various parts of the body.

When we see the arcus senilis in the eye of a patient, or note that he is suffering from fatty, calcareous, arteriosclerotic, or other forms of degeneration of the organs of the body, we at once know that this person practically belongs to the class of the aged, and this important fact must always be borne in mind in the treatment of such a patient. This same degeneration of the tissues is often inherited, and this is probably the reason why the offspring of syphilitics, tuberculosis patients, and drunkards often suffer from cancer at an early age. These children, there is every reason to believe, do not inherit the cancer neoplasm as such, but the resisting power of their tissues is so lessened as to form a suitable soil for its growth and propagation.

The vast majority, then, of cases of cancer occur in persons whose tissues are undergoing degeneration either from advancing age or senile changes. In women about the time of the menopause and in men of a similar age, when the duties and labors of life begin to seem to be a heavier burden than they were in youth, this disease becomes more prevalent.

Cancer *per se* is not a disease which prevails extensively in hot climates. Especially is it comparatively rare among those races inhabiting hot climates who live almost entirely or wholly upon vegetable foods. It is comparatively rare in tropical countries. In Borneo it is unknown. Dr. A. B. Dahlgetty says that he has never seen a case of malignant disease of the mamma in a native of Hindustan. He wonders whether the constant presence of malaria in these countries has anything to do with it. He also calls attention to the want of pressure upon the breasts of the Hindu women by their thin and light clothing, and in the second place to their habit of sucking their children until the breasts are literally sucked dry. Such a gland would appear less likely to undergo perverted action than a gland arrested while its function is still in force.

The inhabitants of certain parts of China, Burma, and India suffer comparatively little from cancer, and in certain localities in these countries it is very rare. What is the cause of this comparative exemption? The facts would seem certainly to warrant the assertion that a diet of vegetable food is inimical to the development of cancer.

The second predisposing cause of cancer that we would mention is the habitual use of the various forms of alcohol as an article of diet. No one can deny the enormous amount of evil that is done to the individual who partakes of it, and also to the community as a whole from the use of alcohol as an intoxicant. But there is a more insidious and more dangerous effect upon the tissues of the body from

smaller quantities of alcoholic drinks, when taken regularly, than is generally recognized. The dilute forms of alcohol enter into the blood and thence circulate through every tissue and organ of the body.

What is the effect of this? The alcohol, by powerful affinity for the water of the tissues, dehydrates and prematurely hardens them; not only this, but alcohol is a retarder of waste in the body. In other words, it diminishes the metamorphosis of tissue, it hinders the separation from the tissues of the body of those effete and waste products which should be eliminated. These used up and waste matters are retained in the body, and tissue hardening and degeneration of organs are the results. If we may use the simile, the fuel is already for a spark to kindle it, and if we have a local irritation, an injury or necrosis of the living tissue, a malignant or other neoplasm may result.

The above remarks do not apply to the drunkard; we all know what his fate will be. Many persons live daily under the influence of and die from the effects of alcoholic drinks who are never suspected during their lives, except by their physicians, to have used them. The daily use at meals of the various "bitters," etc., is essentially nothing more than a thinly disguised tipping under the form of medication, and produces dire effects in the course of time, especially when at the same time little or no bodily exercise is taken.

The third and most predisposing cause of all we believe to be the consumption of too much meat and nitrogenized food. If we consider the uses of meat as an article of diet, we will speedily see that it is taken to supply the waste of the muscles and other nitrogenous tissues of the body. In persons leading inactive lives the consumption of bodily tissue is at a minimum, and hence they need very little meat or nitrogenous food. If the same persons are habitual consumers of alcoholic drinks, even in small quantities, their power of assimilating meat is still further decreased.

In fact, as persons advance toward the close of life their needs for food, and especially for the nitrogenous parts of it, are lessened, and the amount of food given to such persons should be diminished.

Sir Henry Thompson, who is now past 82, says that in old age we ought to diminish the amount of food taken; he further says that half of our ills in old age are due to overfeeding. He also advises and has practiced in his own person the total giving up in later years of the use of alcoholic drinks. (*Journal of the American Medical Association*, November 23, 1901, p. 1402.) In persons who consume large amounts of nitrogenous food, and even when they are habitually users of alcohol, the frequency of cancer is greatly diminished when their avocations require them to take a great deal of exercise, or when they perform hard manual labor. In forty-nine years of continuous practice we have seen very few cases of cancer, with the exception of lip or tobacco cancer, occurring among men who labor in the open air. The reason, no doubt, is that the waste materials produced in the body are burnt up by hard manual exercise.

Whatever theory we may adopt as to the causation of cancer, there are two facts in history that seem now to be generally admitted. The first of these is that it is probably always local in its early

stages, and the second is that its origin is due to an injury or local irritation of the part affected.

Finally, the writer wishes to summarize by giving the following facts, which seem to him to express the history of the causation of cancer:

1st. Cancer is a disease of senility or decay of the tissues, or at least occurs at the time when the retro-grade metamorphosis of the tissues is taking place.

2d. Cancer is comparatively rare in hot climates, and especially where the diet of the inhabitants is composed chiefly of rice, or other starchy foods.

3d. Cancer is very prevalent at the present time where animal food is largely consumed; the number of cases of cancer has been found to increase in proportion to the increase in the consumption of nitrogenous or animal foods.

4th. The theory of Dr. Gaylord that cancer is caused by a protozoon or animal microorganism seems to be disproved by later investigations, and the probability is that cancer is simply erring epithelium which has taken an abnormal growth and development.¹

The most potent cause of the failure of our treatment of cancer is the neglect of the patient to apply to the physician for treatment until the disease has become so far advanced as to render the case hopeless.

How often do women from mistaken feelings of delicacy hide from their physicians the growth in the breast, or the sanious or bloody discharge from the uterus, which are the warnings of the danger to the health and life of the patient.

Believing, as we do, that cancer is simply an error of cell development depending upon the retention of waste matter in the system, the treatment of cases of cancer may be divided into two classes, namely: the preventive and the curative.

The preventive treatment of cancer has been largely ignored by medical men, and yet if the above views of the causes of cancer are correct, it is of overwhelming importance.

Cases of cancer then should be diagnosed and treated at the earliest possible moment. The diet should consist of the various forms of digestible and unstimulating vegetable foods. Alcohol, as a food, should be entirely eliminated, and meats and other nitrogenous foods should be reduced to a minimum amount. Careful attention should be given to the regular action of the bowels, which should take place at least once each day. The urinary secretion should be examined and proper means adopted to correct any disorder or diseased condition of the kidneys.

To epitomize the treatment of cases of cancer, it should simply be the effort of physicians to endeavor to bring their cancerous patients into the highest condition of personal health and excellence of hygiene. It is perfectly astonishing and lamentable to see the apparent helplessness of most of the members of our profession when confronted with cases of cancer. No attempt is generally made by physicians to treat these cases by medication, or to improve their hygiene, and the whole armamentarium medicorum used seems to be confined to the knife, x rays, or some form of electricity.

Valuable as these agents are in the treatment of

cases of cancer, yet it is the firm belief of the writer that our success in these cases would be far greater if we would conjoin with them appropriate medical treatment.

Each case is a study in itself and must be studied individually and treated accordingly.

How shall we treat cases of cancer in the early stages, the only period when we can hope for favorable results? If these growths occur at or near the surface of the body, the very best method of treatment seems to be the x rays or the continuous electric current applied to the growth.

One reason why the x rays often fail to cure these growths is that the application of them or of the continuous current is made over too small a surface of the body. It should be always remembered that the cancer cells are infiltrated into the tissues over a much larger area than the apparent surface of the tumor; a space three times the size of the tumor should always be treated by either the x rays or the continued current.

How do the x rays and electric current cure morbid growths? The writer believes there are three methods of cure, in which their beneficent action may take place and which vary according to the period of growth of the tumor.

1st. In the very earliest periods of the morbid growth these agents cure by their stimulating and nutritive effect upon the vital processes.

2d. In the second or more developed condition of the morbid growth, when we apply stronger currents of electricity or give more vigorous x ray treatment, we inhibit the growth of the tumor.

3d. When the growth of the tumor has more fully developed, we have to depend upon the necrotic or caustic effect upon the morbid growth of strong application of the x rays or powerful galvanic currents.

Another important remedial action of the x rays and powerful galvanic currents in these cases is the fact that the local inflammation induced by them causes a zone of lymph to surround the tumor, thus incasing it and preventing it from infecting the neighboring tissues of the body.

Care must always be exercised to prevent too violent application of x rays or too strong electric currents, for we may have a condition of septic poisoning developed from the extensive necrosis of the tissues produced by these agents.

2129 F STREET.

TEACHING THE DEAF CHILD TO HEAR.*

By G. HUDSON-MAKUEN, M. D.,

PHILADELPHIA.

PROFESSOR OF DEFECTS OF SPEECH IN THE PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE; AND
LARYNGOLOGIST TO THE FREDERICK DOUGLASS
MEMORIAL HOSPITAL.

Can the deaf child be taught to hear? This is not a new proposition, for it was suggested nearly 200 years ago, and striking proofs were offered bearing upon the affirmative side of the question. In the beginning of the last century Itard and Toynbee reported cases of marked improvement in the hearing of deaf persons as a result of so

* Read before the Medical Society of the State of Pennsylvania, in Scranton.

¹ For further proof of this see article published in the *Journal of Medical Research*, Boston, April, 1902.

called aural gymnastics, and later on Professor Victor Urbantschitsch, of Vienna, began a series of extended investigations, which is leading to a more or less general application of the practice in the various Austrian schools for the deaf. Professor Urbantschitsch is still advocating the method and making use of it in his private practice with all forms of deafness from whatever cause, and he reports encouraging results.

Dr. Marcel Natier, of Paris, has recently instituted a system of aural gymnastics for adults, in which he uses a series of tuning forks as a means of producing the necessary sound. The forks vary from the very low to the very high pitch, and by selecting those having the appropriate number of vibrations he aims to stimulate action in the sluggish nerves and thus arouse latent hearing. Natier's method differs from that of Urbantschitsch in that the latter depends almost entirely upon the speaking voice for the hearing exercises, and he claims that the hearing for other sounds will be correspondingly stimulated. When we consider the fact that a child may hear and yet not understand, the importance of using the speaking voice as an exercise becomes apparent.

Bezold claims that more than half of all deaf-mutism is acquired during the first and second years, and if he is right in his calculation the question of prophylaxis should enter more largely into this subject. Hearing is a complicated process, and depends for its integrity not alone upon an efficient conducting apparatus, but also upon the normal action of certain mental faculties. A child may hear speech, but if, for any reason whatsoever, he is unable to give attention and reflection to what he hears his hearing will be of no value to him, and the acquirement of speech will be impossible. Bezold is probably right in his supposition that many young children who become deaf mutes have in the first years some hearing power, which for various reasons, may fail either to develop normally or to be of sufficient strength, to be of value as a means for the mental conception of sound.

It was my pleasure to report and exhibit, at the last meeting of this society, a case in point. The patient was a girl who at five years of age was regarded a deaf mute. It was observed, however, that she could hear and in some degree enjoy certain forms of instrumental music, although she gave no indication of any appreciation of speech sounds, and her only means of communication was that of pantomime. Acting on the principle that if there was hearing for the tones of the piano and the violin there must also be hearing for other sounds, though no understanding nor appreciation of them was apparent, we instituted a plan of educational treatment, patterned somewhat after that of Urbantschitsch. As was demonstrated, she could hear both vocal and whispered speech, when uttered in somewhat close approximation, and she had learned to speak many words distinctly, although she had been under treatment less than a year.

Since our last meeting several similar patients have come under my observation, and the results in two of them have been quite as satisfactory as

those in the case I have reported. The others being dispensary patients and not having received a sufficiently prolonged systematic course of training, have not improved so rapidly. Detracting somewhat from the scientific value of these reports, as showing the importance of aural gymnastics in the treatment of supposedly deaf children, is the fact that all of the other forms of treatment for the improvement of hearing were also carefully carried out. The three children to whom I have referred had nasopharyngeal catarrh as a result of hypertrophied tonsils and septal deformities. These conditions were corrected, however, in two of the patients a year or more before the training of the hearing began, and although the operations relieved the catarrh somewhat, they seemed to have but little effect upon the hearing, the improvement of which in my opinion was due almost entirely to the hearing exercises.

Let us consider briefly first the object of this treatment, and second, some of the details of its application. It is well known that even an adult person being partially deaf, from whatever cause, may become entirely so by a lack of the exercises of the function of hearing, and this is especially true of children, because never having experienced the advantages of acute hearing they have no incentive to give attention to sounds that are not clearly audible to them. A child, therefore, may have a fair degree of hearing power and yet lose it from disuse. He does not hear enough of the conversation about him to attract his attention and to cause him to reflect upon it, and, therefore, he has no inducement to continue to listen, and there follows atrophy of the nerve tracts leading to the auditory centres of the brain and a lack of development also of these centres themselves. There is no clear perception of sound, and there are no sound nor word memories stored up in the brain, upon which the development of speech depends. The primary object of the treatment, therefore, is to prevent the child, having this feeble and inadequate hearing power, from finally becoming a deaf mute with all the disadvantages accompanying this condition.

The practical application of the treatment must necessarily vary with individual cases, but a few general principles are applicable to all. Of course only those children having at least a remnant of hearing power may be regarded as suitable subjects, and the ingenuity of the physician is often taxed to the utmost in determining this point. Urbantschitsch found the use of musical instruments to be of value in making the diagnosis, and in one of my patients the piano furnished the only sound to which any response was given. Every possible means should be employed to detect evidences of hearing and all those children giving the slightest response to any sound whatsoever should receive the hearing exercises. My own practice has been to begin the exercises with sounds similar to those of which the patient has shown some appreciation. If it is the piano that has interested him, let the piano be played regularly in his presence every day for a while and then gradually take up the sounds of the human

voice and particularly those used in ordinary conversation. The child I showed you last year, for instance, gave no evidence at first of hearing or understanding a single word of speech. Even the word *mamma* had no significance to her. Our plan was to point to her mother and at the same time speak the word distinctly and repeatedly in close approximation to the ear. It was found neither necessary nor desirable to speak in loud tones, but distinctness and a slight prolongation of the elements of the word seemed to give better results. Repetition is also an important factor in the procedure. If no indications of hearing the word are apparent the hand of the patient should be placed over the mouth and larynx of the operator, in order to combine the sense of touch with that of hearing and at the same time a mirror may be used to enable the patient to see the movements of the lips and lower jaw. These procedures help to hold the attention of the child and to arouse interest in the work. An attempt is then made to have him produce the sound as he perceives it through the channels of hearing, touch, and sight. It is not a difficult matter to teach even totally deaf children to speak and to understand speech through the senses of touch and sight, but the voice is always harsh and disagreeable. The sense of hearing is essential to the modulation of the voice, and this fact is of great diagnostic importance. It is a rule without exception in my experience that the so called deaf mute who learns to speak in modulated tones has some hearing power that may be improved by exercise.

Teaching the child to speak is quite as important as teaching him to hear, and the one helps the other. It is probable that one never quite hears the sounds of speech accurately until he is able to reproduce them. In the use of aural gymnastics as a remedial measure great patience and skill are necessary. Not only must the teacher possess a knowledge of phonetics, but he must also know something of the child nature, and understand the child's point of view, in order that he may gain his confidence and enlist his cooperation.

My conclusions are:

First.—The hearing of the deaf child may be greatly improved by the systematic use of oral gymnastics.

Second.—The speaking voice used in close approximation to the ear is the most effective form of oral gymnastics for children.

Third.—The training of speech should be carried on simultaneously with the hearing exercises.

Fourth.—The degree of success attained will depend largely upon the patience and skill of the teacher.

1627 WALNUT STREET.

Milk Secretion a Sign of Fœtal Death.—Gessner's observation in 1893 showing that the discharge of milk from the breasts of a pregnant woman coincides with the death of the fœtus is confirmed by others. It is stated that when during pregnancy the breasts become full as after delivery and discharge a milky fluid, the fœtus is dead.

REPORT OF A CASE OF RADICAL OPERATION FOR CHRONIC OTITIS MEDIA SUPPURATIVA.*

By HARMON SMITH, M. D.,

NEW YORK.

ASSISTANT SURGEON AT THE MANHATTAN EYE, EAR, AND THROAT HOSPITAL; CONSULTING LARYNGOLOGIST AT THE MUHLENBERG HOSPITAL, PLAINFIELD.

The patient was an Italian, male, fifty-eight years of age, of large physique. He was sent to me on August 14, 1905, by Dr. C. E. Munger, of Waterbury, Conn., with the following history. No specific or tuberculous history obtainable, and family history negative. The present trouble began about four weeks previously by severe pain in the left ear, followed shortly by discharge which soon ceased. The pain, however, continued and extended over the greater surface of the head. Dr. Munger found upon examination a very much reddened bulging membrana tympani with some fluid escaping. A myringotomy was performed when a quantity of dark and foul smelling pus was evacuated. The symptoms were much relieved and the patient instructed to irrigate his ear frequently. A week later the pain began again, when a second myringotomy was performed. In the mean time a partial facial paralysis had occurred which after the second operation became very marked. Vertigo had also become a symptom.

After three or four days of comparative comfort the symptoms reappeared and more intense than before. The physician then sent the patient to me, as he was just going on his vacation and didn't wish the responsibility of the case while absent. I saw the patient at my office at ten o'clock in the morning, and advised his going to the Manhattan Eye, Ear, and Throat Hospital for immediate operation. His facial paralysis was nearly complete. The superior wall of the canal was sagging, extreme tenderness existed over the mastoid and part of the parietal region, and the patient was dizzy, unsteady in gait, and unable to stand with his eyes closed. The temperature at this time was 99.8°. No history of chill or sweats. Urine normal. Both eyes showed optic neuritis, more marked in the left. Upon operating I found the external cortex sclerotic and unusually thick. The whole external cortex was removed revealing a mass of broken down cells and granulation tissue in the mastoid and antrum. This was curetted out, exposing the dura over the middle cerebral fossa, which appeared healthy. The sinus was exposed, which was likewise healthy. The middle ear was filled with granulations and the probe detected dead bone upon the tympanic vault, so I decided to do a radical operation. After removing the ossicles and granulation tissue from the middle ear I found the facial canal necrosed at intervals and exposing the nerve; I also found the frayed ends of the severed or necrosed nerve.

I made a flap after the method advocated by Heath, which makes the skin cover the posterior and inferior quadrants of the meatus. Otherwise the wound was treated as is usual in radical operations. The temperature went up to 100.4° the next day. Everything progressed favorably except the dizziness and optic neuritis, which continued. The temperature and pulse reached a normal point seven days after the operation, and he left the hospital on August 29th, two weeks after his admission.

Subsequent dressings were made by me at the office until September 8th, when to all appearances things were progressing towards an uneventful recovery, and I sent him back to Dr. Munger in Waterbury. He

* Presented to the Section in Otology, New York Academy of Medicine, January 11, 1906

was treated for one month, during the latter part of which granulations sprang up quickly in the lowest portion of the wound, over which neither the curette nor silver nitrate could gain headway. In addition the staggering gait was more marked, the facial paralysis complete, and there was considerable hoarseness and difficulty in speech and swallowing, which I deemed beginning glossopharyngeal paralysis.

Thick mushy granulations filled the tympanic cavity and they were bathed in creamy pus. Temperature ran up as high as 99.6°, not going higher for several days, with pulse up to 102 and never below 80.

As he gradually got weaker I advised his going into the hospital again, when I hoped to overcome the granulations and pus by silver nitrate and bichloride and alcohol. His throat also received attention. It was difficult to obtain a good view of the larynx, but an occasional view would show paralysis of both the abductor and adductor muscles of the left vocal cord, likewise a paralysis of the left soft palate. A piece of granulation tissue from the middle ear was submitted to Dr. Wright for examination, upon which he reported as follows: "This is granulation tissue in which there are a large number of single walled blood vessels. Considerable effusion of blood cells in the stroma, and a great deal of proliferation of the endothelium in the form of epitheloid cells. From the excessive amount of nucleus fragmentation I judge the case is one of syphilis."

Prior to this examination, however, I had had a neurologist, Dr. Zabriskie, see the case with me, and he had pronounced the glossopharyngeal paralysis the result of a specific lesion of the dura of the bulb. He advised deep injections of bichloride of mercury, beginning on $\frac{1}{15}$ grain, with daily increasing doses. Also increasing doses of saturated solution of potassium iodide. This was kept up for a few days, but the pain of injection was so intense that the patient refused to have further treatments. I then substituted twice the quantity by mouth of the bichloride. His glossopharyngeal symptoms improved perceptibly. The bichloride was continued until the patient was nearly salivated, when I discontinued mercurial treatment and tried tonics. The fundi still showed choked discs with hæmorrhages in both retinæ and some strabismus. This continued until November 10th, when I decided upon another operation. The incision was made in the former line, and all the granulation tissue removed. Dead bone was found over the roof and the floor of the tympanum. I opened into the labyrinth and followed the dead bone on through the semicircular canals and cochlea to the tip of the petrous bone, exposing the dura at the location of the tegmen, which was freely uncovered and found healthy. I also followed the unhealthy dura down over the cerebellum, never reaching a point where it looked healthy but believing I had gone sufficiently far for it to regain its normal condition, discontinued further removal.

The sinus was not disturbed, as there had been no symptoms of involvement. I left the wound open behind the ear and began another siege of dressing, at this time believing I had every reason to expect a favorable result.

The glossopharyngeal symptoms cleared up to a great extent. The patient's gait was stronger and more decided. The dizziness disappeared and he could stand with his eyes shut. The temperature ranged from normal to 100.6°, no chills, sweats or spike temperature. There was some strabismus during this period.

Not until December 6th, nearly a month after the second operation, was there a suspicious rise of temperature. It then reached 102° with pulse of 100. The temperature remained between 99 and 101 until December 16th, when it again went to 102 and showed a

marked drop afterwards to normal. There was at this time an area of granulation tissue over the dura, the size of a half dollar, which was bathed in pus, and a bent probe would sink into this mass $\frac{1}{4}$ inch before meeting any resistance. The patient felt well all this time and not until December 21st, when his temperature went to 104°, pulse 118, were there any symptoms of sepsis. At this juncture he was dull and incoherent, and I operated for the third time on December 22nd. Again after removing a mass of granulation tissue I followed the unhealthy dura of the cerebellum downwards, and evacuated a small cervical abscess, probably a Betzolds, but not believing this to be the occasion of such a temperature, I continued towards the foramen magnum and evacuated an epidural abscess, at the base of the brain, containing about an ounce of creamy pus, without odor. Believing I had at last reached the end of my difficulties I put in packing, continued the lower angle of the wound to the bottom of the cervical abscess, and put on wet dressings.

His temperature dropped by 4 a. m. to 98° in the axilla; pulse 96. His mental symptoms cleared slightly so that he knew his son and myself and talked somewhat rationally. The temperature at 12 o'clock next day went to 101°, pulse 100. It remained below 100° for twelve hours when it started on its upward course until it reached 104° on December 28th, six days after operation, when he died. In the meantime he had lost control over sphincters first and later was unable to pass his urine. There was nervous twitching of both hands, legs, and feet. Hiccoughs, but no vomiting and considerable mental irritation. He was unconscious for two days before death.

Autopsy Notes.—December 28, 1905, made two hours after death by Dr. Zabriskie, pathologist of the Manhattan Eye, Ear, and Throat Hospital.

Body well nourished; rigor mortis imperfectly developed. No external evidence of violence. Permission was given only to examine the brain. Large wound behind the left ear the result of a previous mastoid operation, the walls of which are covered with dry clean granulations. On removal of calvarium, the dura is tense, injected, and over the wound thickened, rough and dry. The anteroinferior portion of the left tentorium is a quarter of an inch thick and contains an evacuated abscess cavity, the inner walls of which show two perforating erosions. Otherwise the dura is as stated. The cranial cavity contains four ounces of cloudy, sanguinolent fluid. On removing the brain the lower edge of the bony wound is seen to be the seat of extensive necrosis, which extends half way around the foramen magnum. It was not permitted to examine the atlas and axis. The upper end of the sternomastoid muscle is dark greenish red in color, soft, friable, and the seat of purulent infiltration.

Brain.—On opening the ventricles about six ounces of a sanguinolent purulent fluid escaped. The superior surfaces of the hemispheres, together with the pia, are injected and œdematous. Many of the sulci, especially both Rolandic fissures, are filled with serum. The Sylvian fissures show purulent exudate extending about as far as the junction with the rolandic fissures. The brain surface and that of the cerebellum is adherent to the dura covering the wound. The base of the brain shows extensive purulent exudate with accompanying thickening of the leptomeninges, especially that covering the bulb, medulla, and crura. The right auditory, facial and glossopharyngeal nerves are imbedded in a purulent exudate which fills almost completely the right pontocerebellar angle. The basilar surface of the optic chiasm is covered with markedly thickened pia arachnoid upon which a free purulent exudate can be seen.

Microscopically there is marked infiltration of the pia arachnoid wherever we find the purulent exudate, which

contains, however, very few evidences of bacteria, only a few isolated diplococci. In many places, especially along the ventral fissure of medulla, the pia arachnoid is enormously thickened and shows very evidently a previous condition upon which a fresh purulent infiltration has been engrafted. The vessels of the meninges are more or less thickened with considerable hyaline degeneration and marked endarteritis. The vessels of the bulb, pons, and brain itself are all enormously engorged with blood, but show very little perivascular round cell infiltration. Stained sections of the Nissl bodies show considerable degeneration of the left facial nucleus. The nuclei of the ninth and tenth nerves show only such chromolytic changes as we might expect from the toxæmia. The ependyma and choroid plexus show intense round cell infiltration.

CONCLUSIONS.

First.—This was a case unquestionably of specific nature, the bony necrosis extending to the foramen magnum, and how much further we are unable to say. To have gained anything surgically without the aid of antisiphilitic treatment was hardly possible.

Second.—The internal ear involvement probably existed at the first operation, as the symptoms pointed to this, though there was no erosion of the inner tympanic wall present to indicate this involvement.

Third.—The microscopical examination revealed only a diplococcal infection. However, this is based alone upon sections, and the comparative nonvirulence of these organisms may have accounted for his tenacity of life after infection of the meninges.

Fourth.—It demonstrated the advisability of removing the bony covering of unhealthy dura, until the limits are reached. Had this been done at the second operation I believe a better chance of recovery would have been accorded the patient.

Fifth.—Careful examination should be made of the inner tympanic wall for necrotic areas, when performing a radical operation, as I have had my attention called to the existence of this condition in several cases, and believe that it may obtain in more cases than we at present suspect.

44 WEST FORTY-NINTH STREET.

THE EARLY AND PREVENTIVE TREATMENT OF ACUTE OTITIS MEDIA.

By OSCAR WILKINSON, A. M., M. D.,

WASHINGTON, D. C.

This is the age of preventive medicine and the early and preventive treatment of acute otitis media has not received the attention that its gravity demands. I have two excuses for bringing this trite subject before the readers to-day. First, it is one of the most common diseases of childhood and one which is most neglected by the general practitioner. Second, because the general practitioner is first to see these cases and can do more for them than any one else.

I know of no disease that is more amenable to early treatment than acute inflammation of the middle ear, or ear ache, in children. It ought to be the exception that these cases should come to suppuration, instead of the rule, as I fear it is to-day. The

general practitioner feels that his patient will be all right as soon as the ear begins to discharge, while that is the very thing he ought to prevent. Instead of taking hold of the case as if it were of serious consequence, he passes it on as a trivial affair, and the child, as soon as the pain leaves him, is permitted to run out barefooted, to play in the rain, to go with head uncovered, to play in the water, to sit on damp ground, a course which is followed at night by a renewal of the attack, ending in suppuration. This may ultimately result in the loss of hearing, in a few cases in mastoid inflammation, and fortunately less frequently, in brain abscess or meningitis. I am not making these statements to frighten any one, but as one who sees daily the harmful effect of neglected cases.

In order that I might impress upon you the gravity of chronic nonsuppurative and suppurative diseases of the middle ear and thus show you the importance of preventive treatment of the disease of this organ, I beg to call your attention to a few facts. Most life insurance companies refuse to insure chronic suppurative cases. They consider a discharging ear such a menace to life that they are unwilling to take the risk. Dench (*Washington Medical Annals*, 1905) found out of 19,323 cases of purulent otitis media treated in the New York Eye and Ear Infirmary, 218 of brain abscess, meningitis, or some intracranial lesion. Geppert found a latent otitis media in 75 per cent. of all inmates in a children's hospital. Bürkner (*Archiv für Ohrenheilkunde* xx, p. 81) reports 104 deaths from the effect of aural suppuration in a series of 33,017 cases of ear diseases of various kinds. Halisher found out of 225 children excluded from school on account of some trouble which prevented them from advancing, that eighty had then, or had had, otitis media.

Symptoms.—Kerley (*New York Medical Journal*, July 8th, 1895), says that acute otitis in the young is more frequently overlooked by the general practitioner than any other disease. He thinks that it is no fault of the physician, but is due to its varied symptomatology. Out of seventy cases observed by Kerley, there was only one symptom present in every case, and that an elevation of temperature above the normal; every child had fever. Pyncheon (*Columbus Medical Journal*, March, 1905) thinks that pain is the most important symptom, but Kerley (l. c.) found only twenty-two out of his seventy patients that complained severely of pain and he says: "If it had been left to the usual sign of pain or tenderness of the parts, in fifty of the cases a diagnosis would not have been made when it was." Nine had been seen by other men who had failed to discover the cause of the fever. Besides pain and fever, the other symptoms of acute otitis media are a decrease in the acuteness of hearing, restlessness, sleeplessness, and a sense of general discomfort shown by rolling and tossing upon the bed or complaining generally. These attacks are usually brought on by the exanthemata, diphtheria, grippe and coryza. Fridenberg (*American Journal of Surgery*, 1904) says that acute otitis media except from diphtheria, scarlet fever, etc., is due to nasopharyngeal diseases. Kerley found that coryza had been the exciting cause of otitis media in eighty-one per cent. of his cases. The acute inflammation set up

in the nasal mucosa by a cold extends to the Eustachian tube and then to the middle ear.

Bacteria are always present in these membranes (Dench, Pierce) and the result of an acute inflammation in these parts depends largely upon the virulent type of the invading host, the soil which they find and the natural resistance of the patient. The short and open Eustachian tube in children permits of easy access to the middle ear and that together with the fact that children suffer more from coryza, etc., accounts for the frequency of otitis media in children.

Treatment of the Acute Attack.—Before a judicial treatment can be instituted, it is necessary to know the condition of the tympanum and middle ear. In order to get this knowledge it will be necessary to make an ocular inspection of the drum membrane. This is usually not difficult to obtain when the physician will use a little tact unless we are dealing with a very unruly child. The treatment of acute otitis media should be both local and constitutional. The child should be put to bed with the head and shoulders elevated, not allowing the child's head only to be placed on the pillow, thus cramping the neck and preventing a return of the venous circulation from the head. Calomel should be given, followed by the good old family remedy, castor oil, or a saline purge. If the attack is followed by, or associated with acute coryza, I am persuaded that castor oil is the preferable remedy, as I am inclined to think it has a specific action in reducing inflammation of the mucosa of the head. The child should be given a liquid diet, and stimulants should be avoided. The ear should be covered with a flannel cloth securely tied so as not to be removed when the child turns over in its sleep. This is a point I wish to emphasize, as I am sure harm is often done by using moist heat and afterwards permitting the ear to go uncovered. In families where the children are subject to earache, such a bandage should be kept on hand. The ear should be protected at all times with a flannel cloth. External to this, dry heat, as hot as can be borne, should be constantly applied until relief from pain is secured. I am in the habit of ordering warmed drops of five to ten per cent. of carbolyzed glycerin, containing atropine, cocaine, and adrenalin instilled in the ear every hour or every two hours. If the child is seen early I am a warm advocate of Politzerization. Usually the primary pain of acute otitis media is due to rarefaction in the middle ear from tubal inflammation, and by using the Politzer's bag at this time we can often give immediate relief. It is at this stage we can do the greatest good. This, if done before any secretion is present in the middle ear, relieves the rarefaction which has produced the initial pain and secures drainage when secretion takes place.

If there is no relief from these methods within a few hours the use of the leech will often give relief. This is a remedy that is not usually employed, but which often gives remarkable relief.

If there is fever present it should be combated with aconite or gelsemium. Where the pain is severe an analgesic should be given. Phenacetin supported by caffeine, given with care, is often found to be very effective in relieving pain and reducing the temperature. If within twenty-four hours there is still no relief secured and there is any evidence of

pus or mucus in the middle ear as shown by bulging drum, the best remedy is the incision of the drum membrane. This should be done under a general anæsthetic, as a rule, and should be done thoroughly. Nitrous oxide gas is an admirable anæsthetic in these cases. Dench (*Archives of Otology*, April, 1905), with whom I heartily agree, says that the "incision should extend from the lower pole of the membrana tympani upwards and backwards following the posterior peripheral attachment through the posterior folds and well upward into the tympanic vault." He says that the "early and free myringotomy in all cases of acute otitis in children is urgently called for." Although we feel that this statement is rather radical, there is no doubt that the early and free incision of the drum often cuts short the attack and prevents serious after complications. Where there is pus or secretion in the middle ear there is but one rational method of treatment, and that operative.

The Preventive Treatment of Otitis Media.—This consists in the removal of the cause which has produced the catarrhal process in the nose and nasopharynx, combined with proper constitutional regime. In most cases of patients who suffer with recurrent attacks of otitis media which either do or do not suppurate, you will find either adenoids or enlarged tonsils, or both. The removal of these growths is most urgently called for. There is probably no operation attended with as little danger as adenotomy, which gives such beneficial results. These growths from the nature of their position, being in close proximity to the Eustachian orifices, are necessarily offending bodies, and their early removal becomes a matter of necessity. Diseased tonsils in children, especially those who are subject to earaches, should always be removed. The general health of the nose and nasopharynx can never be considered in a normal condition when these offending bodies are left. Chronic nasal catarrh should be treated by douches or sprays, using Dobell's solution, Seiler's tablets or any of the various alkaline nasal washes. When the douche is used, and it is usually best in children, the containing vessel should be held very slightly above the child's nose, as a very gentle flow of the douche is desired.

Hypertrophy of the turbinates should be touched with silver nitrate, 10-20 grains to the ounce, rendered anæsthetic by means of cocaine. These hypertrophies usually reduce rapidly after the adenoids are removed, and a better circulation is permitted in the postnasal space. Where there is a deflection of the septum or an exostosis which obstructs the nasal passage, it should be operated upon. After any of these operations it is necessary to see that the nose and throat are properly cared for until they are healed and the membranes assume a normal appearance. The neglect of this often leaves a chronic nasal discharge, the nature of which prevents the membranes from healing. The catarrhal process in the nasopharynx is apt to extend to the middle ear with each attack of cold; this explains the high proportion of cases of acute otitis media following coryza as found by Kerley.

The constitutional treatment consists in meeting the indications as presented in each individual case. These little patients, as a rule, thrive on some preparation of iron; the syrup of the iron iodide

being the one which I am accustomed to use. In cases in which there are large lymphatic glands, or where there is marked anæmia, this treatment should be combined with that of cod liver oil, generous diet, proper clothing and plenty of fresh air. By complying with these simple rules, you will confer on these little sufferers a great boon and deprive the specialist of certain thankless and tedious jobs, which often bring no comfort to the sufferer or credit to the profession. There is nothing more pathetic to the aurist than to have brought to him a young child with both membranæ tympani entirely destroyed, accompanied with a profuse, offensive discharge. In most of these cases we can but ameliorate the symptoms and such children are apt to be more or less permanently deaf, with danger at any time of an extension to the mastoid cells or abscess of the brain. These cases are grave. Dench considers that all chronic suppurative conditions of the middle ear should be subjected to a radical operation if the discharge is not relieved after judicious treatment.

It is the general practitioner who owes these cases much; it is he who can do more to prevent these conditions than any one else, and if you will give these cases your attention, the number of deaf children and the number of mastoid operations and brain abscesses will be reduced fifty per cent. Chronic otitis media non suppurata is a result of these recurrent attacks and this condition is the cause of probably fifty per cent. of all deafness. If these children could have early and proper treatment there is no disease to which childhood is subjected that yields more gratifying results. Jacobi (*Archives of Otolaryngology*, 1905) says: "After all, the treatment of nonsuppurative diseases of the middle ear is rather ineffective." In support of this view he refers to eminent British and American authorities; unfortunately, however, he refers to their articles in regard to sclerosis of the middle ear, that opprobrium of otology. It is exceedingly unfortunate that so great an authority as Jacobi has made such a statement without fixing its proper limitations.

There is a vague idea amongst general practitioners that the treatment of defective hearing in general is usually ineffective, but the sooner the general practitioner learns that the diseases of the ear are just as amenable to treatment as the diseases of any other organ, when they are treated early, the better it will be for all concerned. There is probably no branch of medicine that has been so much neglected as that of diseases of the ear until the last two decades. Since that time, however, otology has been making rapid advances, and to-day we feel as confident of success in the treatment of the diseases of the ear, when we can see the cases early, as we are in the treatment of diseases of any other part of the body. The idea that the treatment of the ear is more difficult and less satisfactory comes from a lack of knowledge of its present rational application.

All middle ear catarrhal conditions in children when taken in their incipiency are amenable to treatment. This consists, as has been before stated, in removing any offending condition of the nose or nasopharynx and keeping these organs in a healthy condition.

Since we know more of the pathology of these organs, by combining constitutional with local treatment, in accordance with their pathology, it becomes an easy matter to produce for these sufferers permanent relief, and that in a short time. Practically all conditions of the middle ear, excepting suppurative conditions in which the tissues have been destroyed and sclerosis in the old, yield most readily to judicious treatment. When the general practitioner is convinced of these facts there will be fewer cases of chronic suppuration of the middle ear, chronic deafness, brain abscesses, and deaths from diseases of the ear.

1404 L STREET, N. W.

A CASE OF ANEURYSM OF THE MIDDLE EAR WITH INTACT DRUM HEAD.

By SELDEN SPENCER, A. B., M. D.,

ST. LOUIS, MO.,

CHIEF OF CLINIC AND INSTRUCTOR IN OTOTOLOGY, MEDICAL DEPARTMENT, WASHINGTON UNIVERSITY; AURAL SURGEON TO THE MARTHA PARSONS FREE HOSPITAL FOR CHILDREN.

Literature: In a careful search through thirty-five works on otology under the heads of aneurysm, angiomas and tumors of the middle ear only two works were found that referred to such vascular growths of the middle ear with the drum membrane intact. Among the works examined were those by the following writers: Buck, Bacon, Politzer, de Schweinitz-Randall, Love, Politzer-Bruhl, Grandle, Lamb, Nottingham, Pomeroy, Troeltsch, Dalby, Field, Cooper, Hinton, Jones, Saissy, Gruber, Barr, Pilcher, Wilde, Toynbee, Hovell, Bishop, Burnett, McBride, and Roosa. In several instances there were two or three works by the same author. Of the above writers only two referred to the subject under consideration, viz.: Dr. Buck in his *Diagnosis and Treatment of Ear Diseases* and Dr. St. John-Roosa in his *Treatise on the Diseases of the Ear*. Dr. Buck reports three of the four cases that he mentions as being on record. He says: "Intra-tympanic vascular growths are probably encountered more rarely than those of a bony nature. So far as I can learn there are but four instances on record in which a vascular tumor developed in a middle ear whose drum membrane was still intact; viz., one reported by Dr. Schwartz, two by Weir, and one by myself." Dr. Buck says further in speaking of the case of Schwartz's: "From the meagreness of the details given, it is not quite clear that the case belongs in the present category." Dr. Roosa in discussing this subject mentions the three cases that Dr. Buck speaks of as belonging in this class, quoting the work that I have just referred to. In addition Dr. Roosa reports a case of his own and makes mention of a case of Dr. Todd's, in this latter case, however, there had been previous suppuration.

By courtesy of my father, Dr. H. N. Spencer, I am allowed to report the following most interesting case in the treatment of which I assisted:

Patient, Miss H., a young unmarried woman, aged twenty-two, called at the office early in June, 1905, complaining of deafness of the right ear accompanied with a pulsation, very regular but forcible and disagreeable.

The following history was elicited: Family history good, all members living excepting one brother who had died of typhoid fever. No history of any serious illness or family taint. Health of all members good. The patient's personal history was equally good, she had been free from serious illnesses, but had had an attack of the grippe two years ago. She had never had any affection of the ear prior to this. The present attack began three months before the first visit to the office. She first noticed a slight pain in the right ear, accompanied by a dull headache, neither marked at all, nor in any way alarming. Following the slight pain in the ear deafness appeared gradually and became more and more pronounced, at first having been scarcely noticeable. With the deafness came a pulsation which also became gradually more and more marked. There was at no time any vertigo and the pain itself was never so serious or constant as to cause her to consult a physician.

After obtaining the above history the examination was made. Both ears were examined, but the condition of the left being normal, the entire attention was given to the right ear. Examination of the external ear without the speculum revealed nothing abnormal. The deeper canal and the membrana tympani were exposed to view through the speculum with a strong reflected light. The condition of these parts was far from normal. There was a marked bulging of the membrana tympani which seemed to merge into the canal wall below. The aspect of this bulging was unusual and peculiar; all of the ordinary landmarks of the normal drum membrane were entirely obliterated. The color of the membrane was a dull dark red. We were unable to make out any pulsation, though the patient laid particular stress on the throbbing. The hearing was tested and found very much impaired on the right side. The whispered voice could only be heard at a distance of two or three inches, and the watch could not be heard on contact. Weber's test showed that the sound was transferred to the affected ear by bone conduction, and Rinne's test was negative. The bone conduction was good and everything indicated that the source of deafness was limited to the middle ear. Though the patient was complaining of no pain, my father and I thought that it would be best to perform a paracentesis, believing that we had to deal with a serosanguinous effusion into the middle ear. My father performed the paracentesis. Following the incision a most alarming hæmorrhage occurred which was stopped with difficulty. The amount of blood lost was enough to fairly saturate three small napkins, and must have amounted to considerably more than two ounces, though we did not accurately measure the amount and could only estimate it. After syringing with very hot water and applying adrenalin chloride the hæmorrhage was controlled, there being then but a slight oozing. A tampon or plug of sterile gauze was placed in the canal pressing on the drumhead. This was packed in very firmly. Six hours later the patient called, alarmed at the blood which was trickling down the face from the ear. On the removal of the dressing at this time it was found saturated with blood and the alarming hæmorrhage was renewed with almost as much vigor as had marked its character in the morning. The hæmorrhage was checked in the same way as the former one had been. On the morning of the next day the same experience was repeated, and again on the evening of the second day the patient noticed blood trickling down her face from the affected ear, and fearing a hæmorrhage she called at the office to have it checked. On removing the drain at this time it was found again saturated, but the profuse hæmorrhage that had followed the incision and had accompanied the subsequent removals of the dressings did not recur. The ear was again cleansed and a new packing placed in the

canal. From that time on there was no repetition of the profuse hæmorrhage. In fact, the gauze next day was found comparatively dry and the opening made by the incision was entirely closed.

From the time of the first alarming hæmorrhage, following the incision in the membrane, my father and I realized that we had to deal with a very rare and unusual case. In my father's experience, and in my very limited one in comparison to his, no case of hæmorrhage of such force and magnitude had ever been encountered. The first thought that occurred to us as an explanation was a probable anomalous course of the internal carotid or of the jugular bulb, but these we could exclude because of the history of the case and the appearance of the membrane, besides the fact that we could feel very certain that there had been no bleeding into the middle ear itself, for by ausculting with the tube and the Eustachian catheter we could obtain a dry sound very clearly. There had also never been any bleeding into the mouth or nose through the Eustachian tube which would probably have occurred to some extent had the middle ear been full of blood, which could not find any other escape, or whose escape was retarded by a plug in the canal. These considerations led us to conclude that the tumor must be either an angioma or an aneurysm of the tympanic branch of the middle meningeal artery. The character of the bleeding, spurting forth as from a single artery, and the character of the pulsation, together with the history and the appearance of the tumor, led us to make a diagnosis of aneurysm.

The treatment we employed was as follows: Internally potassium iodide, in increasing doses, and ergot. Locally we used a solution of adrenalin chloride and ergot aa drachm i , and alcohol drachm ss . This was injected into the tumor by means of a small hypodermic syringe used with an aspirating needle. Several drops of this fluid were injected every other day. This method of treatment was kept up for about eight days, but not seeming to have much, if any, effect on the tumor, it was discontinued and the chromic acid cautery resorted to. The patient stopped coming before the effects of this treatment could be observed; she had become discouraged and especially so, as we could not promise to fully restore her hearing in the affected ear.

I regret not having been able to follow this case to a favorable termination, but I think that even this much of it is well worth reporting.

2723 WASHINGTON AVENUE.

SERUM THERAPY.*

By JAMES R. BLOSS, M. D.,

HUNTINGTON, W. VA.,

RESIDENT PHYSICIAN, CHESAPEAKE AND OHIO HOSPITAL,
HUNTINGTON, W. VA.

When debating as to a fitting subject for this paper, it was borne in mind that anything which might be selected would have to be treated from a student's standpoint, leaving the practical applications to the discussion of the paper. A subject was selected which can be expected to furnish some of the most brilliant victories which the medical man of the future will gain over "The Grim Reaper."

Much has already been done in the realm of serum therapy and even now one of the most dreaded diseases, diphtheria, has been robbed of many of its terrors, to the professional world at least, just

* Paper read before Cabell County, W. Va., Medical Society, December 14, 1905.

as Jenner with his work of vaccination did away with the scourge of the middle ages.

It possibly would not be amiss to deal for a moment with the theories which have formed the working basis for experimentation, the one which seems most nearly to account for and explain immunity, the development of antitoxines and lay the foundation for the rational treatment of disease with sera prepared in accordance with the views advanced.

Serum therapy is founded upon the development of immunity, the precise definition of which term is a difficult one to give in the present state of our knowledge, as to what the condition really is. Stated as plainly as possible, "Immunity is that state of the system in which it has the power to resist the entrance of pathogenic bacteria, to prevent their propagation after entrance has been secured, or to overcome the results of their vital activity" (French).

The term is a relative one, and while absolute immunity is rare, we find that instances of partial or temporary immunity are very common; for convenience we may divide the subject into two great classes: Natural and acquired immunity.

Natural immunity is probably possessed by every individual to a greater or less extent against almost every form of infection. He has at least some power of preventing the entrance of infections, and it is a well established experimental fact that a large number of bacteria are destroyed after their entrance into the body, and it is only after this natural resistance is overcome that infection occurs. Each of us probably has in mind some family, the children of which are very resistant to the common ills of childhood, while the offspring of parents even more healthy, have every children's disease from rubeola and varicella up. Then, again, natural immunity may be a racial characteristic as is shown by the Japanese towards scarlatina and in the almost complete immunity of the negro to yellow fever and malaria. Another form of natural immunity is that styled individual which resembles personal idiosyncrasy or the unaccountable quality which some people seem to possess against the poison ivy poisoning or towards snake venom.

But for us and in connection with this paper, the greatest interest centres in acquired immunity, which may again be subdivided into naturally and artificially acquired immunity.

Naturally acquired immunity is due to a previous infection and is lasting, it is seen in yellow fever, the exanthemata, and generally in typhoid fever when the patient is over 18 years old. In this case, however, it probably does not develop until sometime after complete convalescence, as relapses occur several weeks after convalescence has begun.

Artificially acquired immunity may be either active or passive:

Active artificial immunity is much more slowly developed in the organism to be rendered immune, but much more lasting in its results than the passive form; it is brought about by the injection of attenuated living cultures of the bacterium against which immunity is desired, by the introduction into the organism of cultures which have been killed, or by the introduction of cultures from which the bacteria have been filtered. These set up a reaction on the part of the body cells which results

in their stimulation to the formation of substances which either destroy the bacteria introduced, or neutralize the toxins of these bacteria, or do both.

Passive artificial immunity is developed by the introduction into the organism of sera obtained from other animals which have been rendered immune to the disease by active, artificial immunity; it is very rapidly developed but its duration is transient.

Now to go on a step further to the theory of immunity, or the mechanism of immunity as it is called. In the very beginning let us say that there is no universally applicable theory. The old retention and exhaustive theories are of interest merely from an historical standpoint, so we pass over them. Then comes the theory of Chauveau, that the cells of the body become accustomed to the poison, which theory is still recognized by many as a factor in general immunity. Metchnikoff and his pupils hold that the destruction of invading bacteria and their products is due purely to cellular activity of the body, chiefly of the wandering cells or leucocytes, and the fixed macrophages, including the vascular endothelial cells, cells of the bone marrow and spleen, certain cells of the connective tissue and even those of the nervous and muscular tissue. According to this theory, when bacteria enter the body, they attract the leucocytes (this attraction is called positive chemotaxis) which incorporate and destroy them. This relation is a quantitative one, however, for if the bacteria are in too great dilution they will fail to attract, while if in too great concentration they will repel the leucocytes (this is negative chemotaxis).

Whether or not this phagocytosis is an essential element in immunity, many points have been corroborated by experimental investigation, while it is quite generally agreed among authors that bactericidal substances are derived from the leucocytes, some maintain that this phagocytosis is but a secondary and infrequent phenomenon, others contend it to be the fundamental principle of immunity. Let this be as it may, it is certain that phagocytosis does occur after subcutaneous injection and that it is much more marked in animals which are immune and resistant than in susceptible ones; bacteria so incorporated in the leucocytes are still living and virulent in the early stages of the process. Metchnikoff has also tried to prove that this same reaction may be exhibited toward fluid poisons and particular substances; these claims have, however, been practically disproved. Other investigators have also proven conclusively that bacteria can be destroyed by the blood serum and other body fluids even in the absence of leucocytes.

Working along this line a group of substances known as "Antibodies" have been found in the blood which divide honors with the phagocytes; these may be divided into:

1. Alexines, which are bactericidal substances apparently arising from the leucocytes. Some of these alexines are normally present, constituting a natural nonspecific defense.

2. Lysogenic substances (or bacteriolysins) in the serum of immunized animals which will disintegrate and dissolve the bacteria toward which they have been rendered immune.

3. Agglutinating substances which will cause the

bacteria of the disease to which the animal is immune, to become immobile and adhere together.

4. Antitoxic substances or antitoxines proper, which are formed as the result of recent or remote infection and are produced from the tissues to specifically antagonize the toxins of the bacteria. These substances may be present in widely varying proportions in different cases and as a result we may have a serum which is highly antibactericidal and feebly antitoxic or vice versa, so there is a toxine immunity and a germ immunity.

To explain this mechanism of immunity, as it is called, Ehrlich has elaborated a very ingenious theory, which is styled "The side chain theory of Ehrlich," and it does explain the phenomena of immunity better than any other so far proposed. To begin with, according to this theory, the toxine has a twofold nature and composition, one element represents the poisonous action, while the other represents the combining power, the former he styles the toxophore group, while the other is designated the haptophore group. These two are entirely independent of the central core, or group, of the cell, which is concerned with the proper function of nutrition. When a poison of any sort is introduced into the body it fixes itself to the cells of the body in general, through the junction of the haptophore group with somewhat similar groups of the fixed cells of the body. The poisons thus anchored to the body cells are in position to attack the cells through the activity of the toxophore group, a destruction of the side chains ensues and if the toxophore group is active, a greater or less destruction of the cell. Following this, and just as a proliferation of a fixed tissue follows destruction of the parenchyma of an organ, there occurs a formation of new side chains; this production of side chains is apt to be excessive, like the production of connective tissue mentioned before. These newly developed side chains are broken from the parent body cell and are carried into the circulation where they constitute antitoxine; they exist in the serum in solution and it is probable that the lysogenic power of the serum is concerned in this.

At first glance it is difficult to understand how these cast off side chains can form the antitoxic property of the serum, since the original side chains of the parent body cell are not antitoxic, they are in fact rather the reverse since they serve to bind the toxine to the cells and in this manner expose the body cells to the poisonous or the toxophore group of the toxine, but when this side chain is liberated and dissolved in the blood plasma it is an antitoxine for it then fixes the toxine and in this way prevents it from reaching the vulnerable body cells. Since the antitoxine is a derivative of the normal cells, it has been abstracted from them in other ways than through the action of toxins, for example, experimental investigation has discovered that emulsions of the normal nerve tissues of the brain and chord have antitoxic properties in tetanus.

Ehrlich explains both natural and acquired immunity by his theory. He contends that in the first instance the cells of the body do not furnish side chains capable of uniting with the haptophore group and in this way the toxophore group is prevented from reaching the cell. In the second case of acquired immunity, there is an excessive production

of receptors by the body cells, and those produced in excess of the requirements of meeting and counteracting the toxine present are thrown off into the circulation and remain ready to combine with any toxine having the same affinity, or valence to use a chemical expression, which may thereafter be found in or gain entrance to the body. Furthermore, the antitoxine may disappear from the blood and immunity still persist. On the other hand, death may occur while the blood is saturated with antitoxine, doubtless, as a result of extreme susceptibility. It should be borne in mind that an antitoxine is merely an antagonistic or neutralizing agent and in no sense one possessing powers of regeneration, that while it may help the body to repel or overcome infection, it does not directly assist in the processes of repair which are necessary for the complete restoration of health.

Having in a brief manner dealt with the theories upon which serum therapy has been built, we will now pass to the practical side of the matter. As a result of the studies of immunity antitoxines have been produced with more or less success the best known of which are those of diphtheria, tetanus, bubonic plague and streptococcus infection.

The *preparation* of the various sera is very similar in each case, and since it is the most familiar and efficacious one of all, a short review of the preparation of the diphtheria serum will be given.

The *diphtheria antitoxine* is prepared by the injection of toxine in increasing doses into horses at regular intervals and then withdrawing the blood. The horse is selected because he can furnish a large amount of serum and also because he naturally has a small amount of diphtheria antitoxine. The animals are first tested for tuberculosis and glanders, then receive a small dose of diphtheria and tetanus antitoxines. The toxine for injection into the horse is obtained by cultivating virulent diphtheria germs in alkaline bouillon for five to seven days at 37° Centigrade; then 4 per cent. tricresol is added to kill the germs and the whole is filtered through porcelain with special precautions. This filtrate should be sufficiently virulent in doses of .01 gramme to kill a guinea pig of 250 grammes weight in four days, which dose is called the toxine unit. First the horse gets 1 cubic centimetre of toxine to determine his individual susceptibility; this is followed at intervals of six to ten days, to allow time for recovery from incidental reaction with increasing doses until 500 cubic centimetres can be injected intravenously at a time. Immediately after this, the antitoxic value of the blood diminishes for two days, then gradually increases to a maximum on the ninth day, when the horse has obtained a high degree of immunity and a small quantity of blood has been satisfactorily tested for its antitoxic value. Ten days after the last injection the animal is bled from the jugular vein about seven and one half litres under strict asepsis into sterile vessels. After coagulation and maintenance on ice for a few days the serum is pipetted off through a filter, if turbid, and this serum contains the antitoxine. In the United States some antiseptic is employed to preserve the serum as 4 per cent. tricresol, 5 per cent. carbolic acid, camphor, or 1 to 1,000 formalin. The strength of the serum is expressed in immunizing units, each of which neutralizes 100 toxine units; this is de-

terminated in each sample by a number of careful experiments upon guinea pigs. It has been found that the best working strength is about 750 units per cubic centimetre, if too dilute the dosage is too large, which, if more concentrated, is more unstable and expensive.

The Uses: Diphtheria heads the list for successful results in serum treatment. Both as a prophylactic and curative agent; when properly employed, its results are little short of marvelous, but it is important to observe that success is directly proportional to the shortness of the period between infection and the first serum administration, as is well shown by the report of the Health Department of Chicago, covering the period from October 5, 1895, to February 28, 1899, which report includes 4,071 cases with an average death rate of 6.7 per cent.

Among those, injected on the first day, 305; there was a mortality of .27 per cent.

Among those, injected on the second day, 1,018; there was a mortality of 1.67 per cent.

Among those, injected on the third day, 1,509; there was a mortality of 3.77 per cent.

Among those, injected on the fourth day, 720; there was a mortality of 11.39 per cent.

Among those, injected later than the fourth day, 469; there was a mortality of 25.37 per cent.

Thus, while no case is too serious or far advanced to justify withholding the remedy, the chances of its proving beneficial diminish with each succeeding day, and in attempting to counteract this delay the dosage must be proportionately increased. Tyson says that immediately after infection we should give twice as much antitoxine as is given for the purpose of immunization; after eight hours three times as much, after 24 hours eight times. Therefore, bear in mind that the serum must be given early to avoid irreparable damage, which may occur in one day or be deferred for four days. The most susceptible tissues to the diphtheria toxine are those of the nervous system, heart and kidneys.

Dosage and method of administration for immunization.—The dose is 100 units for an infant one month old, 500 units from two to ten years, 600 units from ten to fifteen years; while a nurse should receive from 600 to 800 units. *For cure:* 2,000 to 3,000 units should be given in the mildest cases in children, who require proportionately larger doses than adults, as they are more susceptible and have less resisting power; this should be repeated in eight to twelve hours if necessary; since the mortality is very high in children under one year, a bacteriological diagnosis should not be awaited in any severe or infantile clinical case. In severe late laryngeal, nasal, and ophthalmic cases begin with 5,000 to 8,000 units and repeat at proper intervals as long as life lasts. Always bear in mind that one large dose is better than repeated small ones, and that a sufficient quantity must be given even if it is 100,000 units.

The injection had best be made in the subcutaneous tissue of the flank, where possible soreness will not interfere with dorsal decubitus. Inject slowly, just under the skin, just fast enough to avoid the umbilication or dimpling of the rising dome of skin, which is due to tension on the subcutaneous trabeculae and the chief cause of pain at this time. Do not rub or compress the swelling, but cover this site with sterile cotton; if necessary, repeat the

injection. Use serum from a different source in order to avoid the danger of cutaneous rashes due to the production of percipitins; it also helps to dispose of the possibility of the deterioration or inefficacy of the first serum used. Of course the site of injection must be changed each time. There has recently been announced a bactericidal diphtheria serum administered in the form of pastilles to be dissolved in the mouth, which if confirmed in practice will be invaluable in destroying, when locally applied, the germs in the mouths of convalescents and also may prove of use from a prophylactic point of view.

The limitations to the serum treatment are: It must be given early to forestall irreparable damage; only a fresh, reliable serum should be employed; sufficient doses must be given, for there is more danger of under than over dosage; and finally, the infection must be pure diphtheria.

While there is no serious danger from antitoxine treatment, yet some accidents must be laid at its door, as these accidents do occur in healthy persons receiving immunizing doses as well as those already infected; they are due, however, not to the antitoxine, but to the serum acting as a necessary vehicle. Not taking time to dwell on them, but leaving the citation of cases to the discussion, we just mention some of the untoward symptoms which may result from the use of antitoxine. 1st: Eruptions and abscesses of the skin; 2d: joint symptoms; 3d: fever; 4th: changes in the urine. Blood changes, hæmorrhage, nephritis, purpura, epistaxis, uterine hæmorrhages have been reported, though the serum has no effect on existing pregnancy. Other accidents are vomiting, profuse diarrhoea, adenitis and cardiac disorders; these are fortunately very rare. A case of hysteria has been reported. The overwhelming majority of these disturbances are trivial and transient.

Now, one more word about the use of antitoxine in diphtheria. "Some of the discredit cast upon this incomparable remedy is due to its exclusive adoption by too enthusiastic advocates. Remember, it does not do away with other and local methods, but supplements them. So, use antitoxine first, last and always, but do not neglect trustworthy, local and general methods."

TETANUS.—The agent is prepared in the same general way as in diphtheria, but presents some peculiar difficulties in its preparation because of the anaerobic nature of the germs. This serum has not been standardized as has diphtheria, though in Japan a serum of 10 cubits per cubic centimetre and one of 100 units per gramme solid are spoken of.

Uses: As a prophylactic the claims of serum treatment for tetanus are not to be disputed, and it is urged by many to immediately employ the agent in all cases where the wounds are of a suspicious character, without waiting for the development of any symptoms, that is, in wounds such as are received on holidays from firecrackers or toy pistols, or received in barnyard stables, etc. Where the disease has developed the outlook is not so encouraging, yet even here the earlier it is used the better, for we always have a forlorn hope, and the new intraneural method of administration seems to promise much in this quarter.

Dosage and method of administration: As a prophylactic dose, give 10 cubic centimetres hypodermically, at the same time cleansing the wound both mechanically and chemically. This dose is repeated in 10 days to catch the germs longest in incubating. Recently it has been recommended to sprinkle the powdered form of the antitoxine over the lacerated surface, regardless of the age or weight of the patient. As a curative agent, the most rational and deserving method for using the serum is the intraneural. In brief, this is to be administered under a general anæsthetic, cleanse the wound by surgical procedure, inject the motor nerves from the affected part with 10 or 15 cubic centimetres of antitoxine, after bruising them to facilitate the entrance and passage of the agent along their substance; now by lumbar puncture withdraw 150 drops of cerebrospinal fluid and inject 10 to 15 cubic centimetres of antitoxine through the same puncture, and lastly administer the same amount near the wound. The whole procedure should be repeated in 24 hours and the subcutaneous and intraneural administrations kept up as long as indicated by persistence of symptoms or as life lasts, for a case is reported when recovery occurred after the use of 3,400 cubic centimetres of antitoxine.

The limitations are virtually those of diphtheria, for success, early administration, adequacy of dosage and purity of antitoxine should be combined. It is the most valuable agent we have for the treatment of tetanus, specific as a prophylactic, and the only hope where the disease has developed.

Of the practical sera there yet remains undiscussed those of bubonic plague and the streptococcal infections, but reports are very conflicting as to their efficiency, and as this paper has already reached a length which was not anticipated, we shall leave them with this mere mention.

Naturally it has been impossible in such a short paper to go much into detail, yet we hope that the little which has been given will be the means of stimulating others to a greater interest in an all important field of therapeutics, upon whose development so much of the future success in the preventative and curative treatment of disease depends. A great deal has already been done, yet far more remains for future investigation. New theories will come to the front which will replace many of the older ones, but it is upon these older theories that the newer and truer ones will be based, until finally we shall really know how Nature prevents and cures disease. Then it is that we, humbly following in her steps, shall be able to use truly scientific treatment. Such a field, gentlemen, lies before us; may we all live to see the ripening of the golden harvest yet to come.

The Theory of Fever.—Giuffrè maintains that the heat regulating function acts differently in healthy individuals than in persons with fever, and also differently in various types of fever, according to the cause of the rise of temperature. (Bacteria, protozoa, etc.) This heat regulating function does not depend upon the reaction of thermic nerve centres, as is usually claimed, but upon the action of the ordinary nerves and nerve centres belonging to the motor, secretory vasomotor, and trophic groups.—*Riforma medica*.

MASSAGE IN DYSMENORRHOEA, ETC.

By GUSTAV NORSTROM, M. D. (STOCKHOLM),
NEW YORK.

In the last article about Chronic Metritis (*New York Medical Journal*, January 27, 1906) I described in the main part the objective symptoms of this disease, how massage acted upon them, as well as the malpositions and the prevalent views regarding these. The most prominent subjective symptom, and at the same time the one which often alone leads the patient to consult the gynecologist, is dysmenorrhœa. It is this we are going to speak of now.

Dysmenorrhœa, which was formerly regarded as an affection sui generis, is nowadays held, and properly so, as only a symptom of different diseases of the uterus and its annexa. Its nature and cause have been much discussed, although not yet agreed upon. Two principal varieties have been described, an ovarian and an uterine. It is, however, often difficult to distinguish one from the other. Pains due to the metritis are often referred to the neighborhood of the ovaries, and as uterine massage relieves them, it proves that they were merely secondary. Primary ovarian dysmenorrhœa is rare. It is seen in chronic ovaritis, but is then probably due to the complicating periovaritis. Massage of the ovary usually exerts a beneficial influence on this dysmenorrhœa, because the perioophoritis is improved by it. We shall not here discuss those cases in which the dysmenorrhœa is due to changes in the tubes, perimetrium or parametrium, especially as these often coexist with changes in the uterus.

Now, then, if we are dealing with uterine dysmenorrhœa, in order to determine its cause and explain its ætiological factors, we must discuss several theories. It has been stated that this symptom was of congestive or mechanical origin. The supporters of the mechanical doctrine assert that the cervical canal is too narrow and retracted to permit free discharge of the menstrual blood. These views are entirely erroneous. Owing to the influence of Marion Sims, the mechanical dysmenorrhœa has for many years been very popular among physicians. Discussion does not always give the desired result, except that temporary relief experienced for three or four periods, which is due to relief of the venous congestion brought about by the hæmorrhage of the operation. The uterine pains continue to trouble the patients just as before. It is only necessary to consider these cases to learn that the mechanical theory is unsatisfactory and its applicability very limited. Frequently we see patients in whom the external os is so small that it is impossible to pass the smallest uterine sound, and yet these patients have not suffered from dysmenorrhœa. There are some atresias which do require operation, but they are due to repeated cauterizations, as we have seen in some of our cases. It is inadvisable to take the exceptions for the rule and base our therapeutics on a rare accident. "The difference," says M. Gallard, "between mechanical and congestive or inflammatory dysmenorrhœa is not very distinct, from the clinical standpoint; the

symptoms of the one pass insensibly into the other."¹

It is difficult to understand how these two theories can be in accord with one another. How can cervical atresia give rise to hyperæmia of the mucous membrane? How can its congestion produce cervical stenosis, unless it is followed by inflammatory exudation?

Scanzoni's experiment, undertaken to disprove Marion Sims's mechanical theory of dysmenorrhœa, appears to me most instructive and convincing. In order to demonstrate that no mechanical obstacle existed to account for the dysmenorrhœa, he introduced an ordinary uterine sound, at the time when the pain was most severe, just before menstruation. Instead of meeting with resistance he was able to move it freely about in the uterine cavity, and on withdrawing the sound, not a drop of blood exuded. The sound was not even stained. Consequently, at that moment no blood could have accumulated in the uterine cavity.

Besides, every gynæcologist has noticed that frequently, when the pains are very violent at the premenstrual period, patients are obliged to remain in bed from twenty-four to forty-eight hours, and then when the eagerly expected moment arrives and the first drops of blood appear, the pain disappears.

Dysmenorrhœa, according to many authors, may be produced by simple mechanical causes such as ante flexion or retro flexion as well as by narrowing of the internal os, arguing that the former may produce by kinking as much obstruction to the menstrual discharge as a narrowing of the cervical canal from a real anatomical cause. On closer inspection, however, this theory does not hold. How often do we notice that there is a most pronounced flexion forward or backwards without the patient complaining of any concomitant menstrual pain? Besides, in the absence of fixed malpositions due to inflammatory processes, the uterine contractions, which always more or less accompany every menstrual period, are generally able to overcome the apparent obstruction due to kinking of the cervix.

Congestive and mechanical dysmenorrhœa vary greatly in their frequency, the former being quite common, while the latter is much more rare. Dysmenorrhœa, sterility, and leucorrhœa, are due to the same cause, chronic uterine inflammation. If we desire a more precise explanation for the congestive variety, the anatomical researches of Patenko furnish it. We know that the terminations of the nerves end in the cul de sacs of the glands, and it is at the surface of the mucous membrane that the last part of the menstruation takes place. The expulsion of the blood and the return of the mucosa to its normal state are phenomena of organic restoration. It is hard to imagine that all this will be regular, and that the nerve endings are not in some way or other affected, when there are alternative areas of passive uterine congestion and exudation. Then the same conditions are gone through again with the same phenomena, for we have to deal

with a process of great simplicity and whose results alone vary.

Besides the just named forms of dysmenorrhœa, I also admit with Theilhaber and others the existence of dysmenorrhœa of nervous origin. How could one otherwise explain the complete relief from menstrual pain after a change to better hygienic surroundings, even though the anatomical conditions remain unchanged. These cases are particularly frequent among those of neurotic tendency. It is possible that spasm of the internal os, due to increased nervous irritability, may be the cause of the trouble, just as we see it in nervous spasm of the œsophagus, the stomach, the bowels, etc., to say nothing of uterine troubles deriving from neurasthenia and particularly hysteria, which may entirely simulate any of organic origin.²

CASE I.—Mrs. S., twenty-eight years of age, native of Sweden, consulted me in Paris in the month of December, 1878, on account of violent pains in the menstrual periods. In 1874 she had had a miscarriage in the early months of pregnancy. This accident did not produce any immediate consequences. It was only four or five months after this that she began to complain of pain at the approach of her menstruation. In the interval she was tormented by a dull, bearing down pain in the back, with a dragging sensation in the loins. The pains gradually increased in intensity, and the menses got so painful that the patient was obliged to remain on her back for two or three days. As soon as the menstrual flow came on, the pain ceased. Her general state of health has suffered very little. The patient always presented the appearance of perfect health.

The digestive tract was not deranged until the spring of 1877. After this the menses were nearly always accompanied by a diarrhœa, which persisted until after the cessation of menstruation. No tenesmus, no colics. The patient was exhausted after each one of these attacks, but she picked up very quickly, and to such an extent that after a few days no one would surmise that anything was the matter with her. This patient had been treated with cauterization of the neck of the uterus: sitzbaths, iron and saline baths (Kreuznach); enemata of opium; suppositories of belladonna. The intestinal trouble had been treated by another physician, but he had never succeeded in stopping the diarrhœa for more than twenty-four hours.

When I saw this patient for the first time, she had not followed any treatment for over eighteen months. She had a leucorrhœa, quite insignificant; but the diarrhœa and the dysmenorrhœa were as severe as ever; the latter obliged her to stay in bed for forty-eight hours if she desired any relief at the time of menstruation. This always came at the moment when the blood appeared.

Upon examination the uterus was found to be enlarged in ante flexion, and exerted a great deal of pressure on the bladder. The former frequent micturition no longer existed. The consistence of the organ was softer than usually, and it was quite movable. Nothing was to be detected in the cul de sacs. The sound entered for more than 7 centimetres.

In the beginning, massage was painful, especially on a level with the fundus uteri; but the pain decreased a great deal after a fortnight. The treatment was begun immediately after a menstrual period. At the next period the patient was quite surprised at the painless menstrual flow. The mere thought of the more or less painful séance which she was about to submit herself

¹ *Leçons sur menstruation*, p. 278. Paris, 1885.

² See Windschel, *Neuropathologie und Gynäkologie*; Lomer, *Die Beurtheilung des Schmerzes in der Gynäkologie*; and particularly Krönig, *Ueber die Bedeutung der funktionellen Nervenkrankheiten für die Diagnostik und Therapie in der Gynäkologie*.

to, had probably produced sufficient mental shock to cause a rupture of the capillaries of the mucous membrane. The pain did not return during the five days of her menstruation; and, what was queer, it did not set in during the entire duration of the treatment, eight weeks (forty-two séances). Diarrhœa accompanied the first and second period, but the stools were less liquid. Subsequently the diarrhœa stopped entirely. The patient felt much better. There was no longer any sensation of heaviness in the abdomen or pains in the loins; the consistency of the uterus was increased, it being always in anteflexion.

I saw the patient again after the menstruation that followed massage. There was no dysmenorrhœa, properly so called, but the patient did not feel as well as during the preceding epoch. She complained of a sensation of uneasiness in the abdomen. Ten more séances were sufficient to cause its disappearance. Twenty-two months after the cessation of treatment I received a letter from this patient, who had returned to Sweden, in which she stated that she had had no more menstrual trouble or diarrhœa.

CASE II.—Mrs. M., thirty-six years of age, came to my office in Paris, in the month of April, 1880. She was the mother of two children. Her menstruation commenced at the age of thirteen without any complication, and have been always regular. But since her last confinement she has been treated by different specialists for uterine catarrh with extensive ulceration of the cervix. Hydrotherapy gave amelioration, but only of a temporary nature. From time to time, especially at the time of the menses, she complained of pains in the region of the loins, radiating into the thighs, moreover, of dull pains over both ovaries. These pains sometimes assumed an acute, paroxysmal character. The leucorrhœa, formerly profuse, was then insignificant, only a slight mucopurulent discharge. The duration of the menstruation was four to five days. The dysmenorrhœa only had increased. For more than two years the patient was obliged to stay in bed forty-eight hours before the onset of the menses. The pains ceased as soon as the sanguineous flow was established; they reappeared, but very slight, the following day and lasted to the end.

Upon examination I found a voluminous uterus, movable in all directions, with marked anteflexion; tenacious and thick mucoid fluid escaping the cervical orifice, although only in small quantity. Intestinal meteorism rendered massage very difficult. The uterus was a little sensitive on pressure. The manipulations provoked a sensation of pressure as though traction was being exerted in the region of the heart. These remote pains were more painful than the local ones. They ceased entirely after a fortnight. The treatment was begun immediately after a menstrual period, the next menstruation, as with patient of Case I, came on quite suddenly and so to say by surprise, as it was not preceded by any prodromata. During the entire duration of the menstrual period she had no more pain. The patient no longer complained of pains in the region of the ovaries or the loins. There was no more leucorrhœal discharge, no constipation, and the meteorism, too, was almost gone. The treatment lasted from seven to eight weeks; there had been forty-four séances. The patient gained flesh and strength and looked quite healthy. I saw her several times during the following years. She was always enjoying good health.

And now having briefly described the most important symptoms of chronic metritis, the question arises: How does massage act in these cases? It seems first that the manipulations could not act in a proper manner upon the parenchyma through its entire thickness, especially on the deeper parts, situated in the neighborhood

of the uterine cavity. The treatment seems also less efficacious on these than on the superficial parts, where the manipulating is more directly applied. Where the uterus is more than ordinarily hard, or where it feels as if there were some deep foci of induration which, some might say, are not capable of being influenced by the manipulations, the consistency of the uterus is somewhat favorably influenced by massage and becomes a little softer. If the uterus is soft, which is more common, and which is fortunately more favorable to our treatment, massage makes it firmer and more resistant. It is somewhat curious to see how in the latter condition the uterus, as it increases in consistence and diminishes in size often becomes firm and globular like a billiard ball, with a tendency to slip away from the hand at each movement.³ Only in rare cases, and these generally in multiparæ, are the abdominal walls sufficiently thin and flabby to enable one to grasp the cervix from above. This, however, although desirable is not essential, for the relation between the cervix and the body of the uterus is so intimate that massage of the latter is sufficient to act favorably on the former. I have seen numerous cases of obstinate cervical catarrh and cervical ulcerations cured after the venous stasis of the organ was removed by this procedure.⁴

It must be understood that massage is useless in the final stage of chronic metritis, that of sclerosis, where there is more or less complete degeneration of all the uterine elements except the connective tissue, which seems to be increased in quantity at the expense of the others. No matter how long the uterus is massaged, the degenerated elements cannot be restored to their normal condition.

The procedure causes its ordinary effects, and it seems useless to describe in detail here. It diminishes the stasis and accelerates the circulation perhaps in the uterus more than in any organ on account of the importance of the muscular element of which it is composed. It provokes contractions of the latter. Some patients feel that these contractions continue for a while even after every séance of massage. Massage is doubly indicated in chronic uterine inflammations because it regulates the circulation, increases the muscular tone, and causes a complete change in the nutrition of the organ, three very important elements in this process.

We arrive now at a certain number of affections in which massage is useful. It is impossible to place them in the same category as those we have already discussed. In the former our position was a correct one to take; massage was efficacious; the patient's health returned, and the uterus resumed its former functions. The results have been less striking in cases we are about to describe. If you except subinvolution which is

³ I recall an instance in this connection where a surgeon at one of the hospitals in Paris, when taking hold of the fundus uteri, at first thought a woman a virgin because her uterus was so small and globular, when as a matter of fact she had been the mother of two children and had been suffering from chronic metritis, with a very large uterus, and whom I had scarcely finished massaging.

⁴ Similar beneficial results have been seen in various diseases of the stomach, where only a portion of that organ could be acted upon by massage.

cured entirely by massage, you may be able to say that even in these massage is an excellent palliative, holding its own with the best recognized conservative measures.

One thing which is almost neglected in practice is to observe whether involution of the womb occurs regularly and without delay. Sometimes at the proper time this process of involution ought to be hastened. Frequently it may be possible to predict the development of a chronic metritis with its consequences, as well as posterior displacement, which constitute nearly all of the complaints of women that have borne children. Most of these are indeed the result of delayed involutions after confinement, and more frequently after miscarriages. The enlarged uterus of its own weight has a tendency to sink, and at the same time the suspensory ligaments are softened and relaxed. Massage, at first with light friction and after a few days with heavier pressure, will increase the venous and lymphatic circulation, produce contractions of the uterus and consequently act favorably on its nutrition. Organic changes occur very quickly, not only in the uterus itself, but also in the surrounding tissues. Under the influence of massage the suspensory ligaments regain their tonicity and elasticity, and thus give proper support to the uterus.

Prolapse of the Uterus.—Brandt and others have employed massage in these conditions. It was one of the measures of a method used, comprising 1, elevation of the uterus, and, 2, gymnastic exercises of the thigh muscles, etc.

The results not having been very encouraging even in the hands of Brandt himself as regards the permanent effect of the treatment, the method is at this moment almost abandoned. This is particularly due to the circumstance that in recent years, the operative treatment for prolapse has yielded most brilliant results, as the technique has improved. They are very satisfactory in regard not only to the immediate effects of the operation, but also in the majority of cases to the permanent results.⁵ Yet Dr. Prochownik, of Hamburg, one of the few who still adhere to this method of treating prolapse, in his work on pelvic massage,⁶ discusses this subject at great length, and reports many cases where he obtained good results without operation.

Fibroids.—The principal symptoms of uterine fibroids, the menorrhagia and metrorrhagia, are due to metritis arising from the irritation of the myoma upon the uterine parenchyma, and not from alterations of the endometrium, as has always been the prevailing doctrine.

Dr. Theilhaber, as well as his assistant, Dr. Hollinger, have undertaken to examine macroscopically and microscopically eighteen uteri some hours after they had been removed,⁷ in order to determine the real origin of the hæmorrhage

in uterine fibroids. They had been able to show that the menorrhagia here as concerns their origin are quite similar to those in chronic metritis. The same insufficiency of the venous system leading to dilatation of the veins with the consequent stagnation of blood was found, while the endometrium was not thickened nor sufficiently altered to explain the hæmorrhage.

It is, then, the mesometrium and not the endometrium that has to be the chief object of our treatment. It is evident that the result of massage could not prove the same as in idiopathic metritis, the effect being here only of a more or less transitory nature as long as the provoking cause, the tumor, remains.

I have often employed massage in the treatment of small and medium sized fibroids, and obtained some improvement. It is a palliative measure often applicable, and at all events harmless. The diminution in size of the tumor sometimes noticed after massage, just as after electricity, is only apparent and due to the disappearance of the œdema surrounding the fibroid. It gives one the impression as though the fibroid itself had diminished in size; but in reality the tumor itself is by no means influenced by the treatment. For example:

CASE III.—A girl, eighteen years of age, had become so anæmic on account of the incessant metrorrhagia that her restoration to health seemed doubtful. She had several fibroids. Under the application of massage her metrorrhagia stopped entirely, but the fibroids remained the same as before.

It has seemed to me that in the interstitial variety the procedure is equally applicable. Besides, acting upon the even here not unfrequent menorrhagia, it causes the tumors to become more superficial, at the same time, however, the surface of the uterus often becomes uneven. It is advantageous for them to become superficial. Subperitoneal fibroids grow more rapidly, but are better tolerated. Submucous fibroids become more accessible and capable of complete removal. Freudenberg, Ziegenspeck, and Brandt report cases where small fibromata had disappeared under massage. I have not had the same experience. I also apply massage in large myomata, if the pain does not contraindicate it. Their growth, especially if rapid, causes tension and irritation of the serosa, which invests it, from which various kinds of abdominal pains arise. These pains are not all due to the friction of the serous surface, but as Ziegenspeck has shown, to the adhesions of the tumor to the surrounding pelvic organs. According to him, the growth of the tumor is not arrested at the menopause, although the uterus at this time becomes more anæmic. The nutrition of the tumor is increased by the increased quantity of blood going to the growth through the adhesions.

In all cases where there is more or less constant pain in the region of the tumor, with tenderness on pressure, it is necessary to apply massage very gently. When massage is applied in this way for several weeks not only the slight adhesions due to the perimetritis will disappear, but the thicker adhesions will also become attenuated to a marked degree.

⁵ I here take occasion to assert that although the subject of these articles is the nonoperative treatment of gynecological affections, I intend by no means to underrate the value of operative interference, inasmuch as I have often employed this method myself in proper cases during my early days of gynecological practice. But I have noticed that in many cases, and particularly in parametritis and perimetritis, the operative procedure is, even in this country, often resorted to where gynecological massage would be entirely sufficient to bring about a cure.

⁶ Massage in den Frauenkrankheiten. *Archiv für Gynäkologie*, xxxi.
⁷ Theilhaber und Hollinger, *Die Ursachen der Blutungen bei Uterusmyomen*.

CASE IV.—Miss L., eighteen years of age, came to consult me in the month of March, 1878. She menstruated the first time at fourteen years of age. The duration of the period was five to six days; nothing abnormal about them. She went six months without any sign, when the periods returned suddenly. The duration of the subsequent menstrual periods became longer, and they were at the same time accompanied by acute pains in the back and in the loins, sometimes on the left, sometimes on the right side. Violent at the approach of the menses, they gradually diminished as the menstruation progressed. Since about a year the duration of the menses had increased so that finally the flow became almost constant, and it was almost impossible to make out the precise moment of the menstrual period. She had frequent desire to urinate, suffered from obstinate constipation, œdema of the feet and the malleolar region.

Astringent vaginal injections and disinfectants were administered, when the discharge assumed a bad odor. Iron, cinchona, ergot were given without any amelioration. For the last four months the patient had been obliged to remain in bed for the greater part of the time. The blood had daily grown paler, without any tendency to coagulate. She had become thin and weakened to such an extent that she could scarcely walk. Cephalalgia and palpitation were permanent; while the least effort provoked giddiness.

The uterus was found to be slightly displaced backwards, and presented to the touch the sensation of an irregular mass, because it was the seat of several fibromata, most of them the size of a walnut, more or less prominent on the external uterine surface. The hysterometer was introduced with quite some difficulty.

Two weeks after the beginning of massage the young girl declared that she was losing less blood. After six weeks there was a marked amelioration. The metrorrhagias became less abundant, and the other symptoms also diminished. Her appetite came back. Under the influence of the same treatment, prolonged for several weeks, the hæmorrhagias ceased completely. The fibroid tumors did not decrease in size, they seemed to be even more prominent than before.

I saw this girl four months later at her home. She had grown stout, and could walk and make extensive tours on foot. The menstruation was reestablished, but the duration was always long, lasting nine days. Her parents asked me how I was disposed toward her idea of entering matrimony. I gave an unfavorable advice, telling them of the possibility of the return of the affection. My advice, however, was disregarded, and she married toward the end of the same year. I have seen her several times since. Her general state of health remained excellent. Fortunately she did not become pregnant.

Massage in Affections of the Neighborhood of the Uterus.—Most of the observations which were published by me under this title in my monographic work about the matter,⁸ were recorded at Dr. Péan's clinic, in the Hospital Saint-Louis, in Paris. The state of the patient was carefully examined into at the beginning of the treatment. Massage alone was used, and after the treatment her condition was again examined. Consequently, if there was any cure or amelioration, it could only be attributed to the last form of treatment.

The same as in cases of chronic metritis, I had the patient come back at epochs varying from six months to two years; unfortunately I have not been able to obtain in all cases what I desired in this respect. Some of the patients, who lived in the country, were poor, and it would have been

unreasonable to ask them to make a long and expensive trip for the sake of a simple examination. Others who lived in Paris promised to return at a certain date, but I never saw them. In spite of all this, future examinations were made in many cases. I especially insisted on these examinations when I had to deal with uterine deviations, versions, or flexions. My results have been rather satisfactory.

The precautions we are to take at every séance of massage are the same as those in regard to massage of the uterus, already spoken of. The patient has to breathe freely, and we have to attract her attention as much as possible in order to cause more readily a relaxation of the muscles of the abdominal wall.⁹

Let us now suppose that we massage in the most usual manner, that is, by the combined method, abdominal and vaginal. We proceed as follows: Two fingers are introduced into one of the vaginal cul de sacs, support the exudate and, if possible, push it toward the other hand which works through the abdominal wall. Thanks to this manœuvre we may sometimes get at the exudate without any difficulty and without the patient suffering too much.

We may massage in situ the fixed portions through the abdominal wall; the nearer the affections are to the posterior wall of the pelvis, the greater is the distance the fingers have to pass over and the more powerfully we have to press, the more deadened becomes the tactile sensibility. It is in these conditions that the rectal route is particularly indicated.

Generally when the vaginal examination is made with the forefinger and the middle finger, the ring and little finger are closed into the palm of the hand. The pressure of the articular osseous extremities of the first and second phalanges on the perinæum is painful to the patient. I prefer on this account to hold, in cases that are the object of our treatment here, the fingers straight, like Brandt, and in pressing down and back on the perinæum. We are thus enabled to reach higher up and we do not hurt so much.

In most cases it is well to have the patients assume the same position as in massage of the digestive organs. They will be placed in the dorsal position, the legs flexed on the thighs and these on the pelvis.¹⁰ Marked curvature of the vertebral column, especially of the lumbar region, must be avoided, because, as I have already mentioned in the treatment of constipation, it will produce a sort of bulging forward of the abdominal viscera, and an increase of tension in the abdominal wall.

In a few rare cases it is better to have the woman stand up during the massage. We can easily find out with the patient in this position whether the pelvic organs have or have not a tendency to sink and to get nearer the fingers placed in the vagina. The high seated exudates in the pelvis are more easily reached, than if the

⁸ Some persons learn this very quickly, others find it more difficult, and some will never learn it.

⁹ I must not forget to mention here, in allude to the necessity of taking a good position, to avoid the mobility of the patient. It is necessary to make sure that the treatment has always been performed underneath the garments, which are only loosened at the waist.

¹⁰ *The Manual Treatment of Diseases of Women*, G. E. Stecher, 1903, 250 pages.

patient is in a dorsal position. The intravaginal fingers play an almost passive part in the act of massage properly so called. They support the organs or the inflammatory products on which the other hand is working through the abdominal wall; that is to say, these intravaginal fingers must remain quite fixed and may only be displaced a little, when we desire to support a different part of the exudate. Brandt advises preliminary circular frictions of the abdomen. The integument will then get accustomed to the contact of the hand. Its sensibility and that of the subjacent muscles is diminished. The wall can be more readily pressed down and the intestinal mass be better repelled. The object of preliminary centripetal frictions, in which the palm of the hand is turned towards the sacrum, is to produce depletion of the lymphatic vessels of the region and render them more fit for absorption. These frictions are of an at least doubtful utility.

In order to get a good and proper hold of the mass of the exudate, the abdominal wall is slowly and gently pressed down. All shocks, which might be able to awaken or increase the sensibility, are to be avoided; in difficult cases we have here, as well as we did in the treatment of uterine affections, to profit by the period of expiration, to introduce then our hand as far as possible in pressing down into the abdominal wall; at the next expiration we push it still deeper.

Vulliet was right in advising to touch the abdominal wall with the last phalanges of the fingers and not with their extremities. The sensation produced in this way is less disagreeable. When we have arrived at the exudate, we must give the patient time to recover from the disagreeable sensation she experiences. Then the physician grasps the tissues, which he desires to subject to manipulation.

If the walls are too thick, too rigid or too sensitive so that the exudate cannot be reached without experiencing great difficulties, then it is a case for separate and preliminary massage of the abdominal wall for some time, as is advised in uterine massage. This procedure renders the integuments more supple, less sensitive, and the abdominal muscles less irritable. The meteorism which is of great inconvenience in the manipulations is likewise diminished by this manœuvre.

Massage must always be performed in the direction of the ascending venous and lymphatic currents, that is to say, from the neighborhood of the uterus towards the pelvic wall, the sacral and sacroiliac regions.

Before the first séance the patients complained of only one kind of pain; now another is added to the former. They experience pain in certain parts of the abdominal wall which they cannot quite locate. This is the result of traumatism necessarily produced by the procedure; it is of no importance and lasts but a few days.

We must proceed gently and cautiously, otherwise we shall cause derangements which nearly always prevent us from obtaining the expected results. Slight pressure and short sittings are the invariable rules at the beginning.

Great attention must always be paid that nothing

sudden or unexpected happens during the séance. We must take care to retain with a firm hold what we have seized, because the slipping of the tissue through the fingers produces a sudden traction on the nerves in the neighborhood and a very painful sensation. After we have acquired more confidence and dexterity; after we have gradually made the patients accustomed to the manipulations, we may work longer and more energetically; the séances may even last up to ten minutes.

It is well to allow short intermissions several times during the sitting. No one can imagine how beneficial these interruptions are to the patient; the physician himself finds an advantage in them; it is a means of sparing his strength. By rest I mean a momentary stopping of the manipulations. It is not necessary to loosen one's grip.

Another very useful precaution to counteract fatigue is to massage with the hand of the side opposite to the exudate; if this is at the left, the right hand has to work on the abdominal wall and the forefinger and middle finger of the left hand are introduced into the vagina and support the exudate. I employ two manipulations: petrissage and distention.

(1) Petrissage is the most useful manipulation and the one which is most often employed. The diseased part is slowly and gently rubbed or rather kneaded, as indicated by the word, with the fingers of the right hand on the abdominal wall; the two fingers in the vaginal cul de sac serve as a guide and support. Petrissage is especially useful when there is a chronic infiltration of any part of the pelvic cellular tissue, or when old inflammatory remains in the broad ligaments exist. The force to be employed must be graduated according to the sensibility and the consistency. We always begin at the periphery of the inflamed area or inflammatory deposit, and proceed towards the centre.

(2) Tension is a manipulation which is not much used except in gynecology. It always includes tension and pressure, to which friction is often advantageously added. The object is to seize between the fingers placed in the vagina and on the abdominal wall those parts of the tissue which are to be distended. This is difficult, if they are of small size. The intravaginal or intrarectal fingers exert a slow, gentle progressing tension on the exudate directed towards the right hand.

After a few moments these fingers are slowly withdrawn, while the right hand follows the movements downwards, always with a great deal of care not to let anything slip. I always try to act in opposite directions with both hands at the same time. At every sitting the procedure is repeated eight or ten times; later on it may be repeated without any inconvenience ten to twenty times.

Tension is indicated every time we have to deal with adhesions of all kinds or consistency; it is also advantageously made use of when more or less retracted inflammatory products exist in the thickness of the broad ligaments. Applied in the first cases it is of all the manipulations the

one which requires most care and prudence, the most tactile acuteness and exact appreciation of the strength that has to be displayed. All unskillfulness might produce accidents. Our purpose is to render the organized tissues more supple and elastic, without causing them to disappear. Sometimes we are even obliged, in order to succeed, especially in old cases, to employ a certain amount of strength. I have never observed any bad results from this. In some cases it is well to add petrissage.

Displacements of the pelvic organs are natural and frequent consequences of the presence of exudates. The uterus is then very often used as a lever for exerting the tension; this is not possible with other organs.

We have proceeded under the most favorable hypothesis; we have supposed that the sensitiveness of the patients was such as to render a complete examination possible and permit us to reach the exudate through the abdominal route.

But the examinations are sometimes so painful that it is impossible to form an exact idea of the state of the uterus and its vicinity, and yet there is perhaps no procedure that requires such definite and exact diagnosis as the massage in question. In some very rare cases one is obliged to resort to chloroform narcosis; this is, however, an extreme measure only to be thought of if nothing else can be done.

After having overcome all these obstacles, can we say that we have now the means of making as near as possible methodical examinations? This is not the case. The determination of the objective symptoms, however interesting and indispensable they may be, are not always sufficient. The local modifications of the sensibility present an interest of the highest order; very often these modifications alone give us information of the age of the exudate and the disappearance of the acute phenomena.

For lack of information on this subject we may very easily not be able to recognize the small deposits of chronic peritonitis, which it is, however, indispensable to consider during the treatment.

All authors do not adopt this operative procedure which I have described, to its full extent. We are also obliged to modify it in certain conditions. Brandt introduces only one finger into the vagina. I do not see the advantage of doing this. We cannot possibly get so high up as with two, unless we have an exceptionally long forefinger. As Ziegenspeck has properly remarked, the sensations perceived with one finger are less precise than those which we obtain with two; we might well enough suspect the inequalities of a surface, but it is impossible to get an exact notion of the extent and thickness of what has to be massaged: with two fingers, on the contrary, we obtain stereometric information.¹¹

Formerly I maintained that I saw no advantage in massaging by the rectal route. This time I do not wish to make such an assertion; I am rather inclined to the opposite belief.

In many cases this is preferable to the vaginal route, in some it is the only that can be chosen.

In virgins it is impossible to perform pelvic massage, except by the rectal route. Moreover, through experience very precise notions on the conditions of the accessible organs are acquired. The rectal route is also the one to be preferred when we are acting on an exudate in Douglas's pouch, or on those placed very high up on the side of the iliac fossa or on the ovaries, which are adhering either to the posterior pelvic wall or which have fallen downwards into the lower pelvic floor and have become fixed in this position by adhesions. The rectal route does not present any more difficulties to massage than the vaginal one; the extremity of the forefinger is introduced and directed towards the anterior rectal wall. Exploration and massage are performed in the same way as by the vaginal route; that is to say, the rectal finger is used as a support, and also to bring the exudate up to the fingers that are working through the abdominal wall, or vice versa. It thus plays an active and passive part in the frictions and the tension.

Maalning.—A manœuvre which Brandt considers as of great importance, and which can only be applied through the rectum, he calls *maalning*.¹² The patient is placed in the dorsal position, the legs are flexed on the thighs, and the thighs on the pelvis; in some cases patients have to stand up. The physician introduces the forefinger into the rectum and with the last phalanx performs gentle and graduated frictions on the surface of the exudate. *Maalning* is, then, in reality only mediate effleurage, inasmuch as between the working finger and the tissue, whose absorption we wish to provoke, there is only the rectal wall. When the sensibility is diminished, which generally happens after a few séances, one may press harder; the *maalning* then becomes similar to friction.

The patients sometimes complain during this manœuvre of a rather violent pain in the back and in the thighs. This proves that we are relatively near the sacral plexus or that some of its filaments have been touched. When our attention has been drawn to this, it is easy to spare the patient these pains by avoiding the region whose irritation produces these pains.

The menstrual period exerts a favorable influence on the absorption of the exudate, the same as we saw it do in chronic metritis. We are fortunate enough to find, in resuming our treatment after the interruption, that there is a spontaneous amelioration of the local condition. Brandt and Niessen, of Christiania, thought that advantage might be taken of this physiological process and that the manipulations ought to be continued during the menstrual periods. They claimed that the manipulations would not be any more dangerous at this moment than at any other. By making the séances a little shorter and by proceeding very gently, they followed up the treatment without any interruption and thus profited not only by the proper advantages, which it possesses, but also by those of the menstrual periods.¹³

¹¹ The word *maaling* comes from the Swedish word *manla*, which means to feel.

¹² Brandt has carried out these ideas in a great number of cases without ever having to repent for them, and professes never to have had an accident.

Not to speak of the disagreeable features attending the giving of massage under such conditions—alike disagreeable to the physician and to the patient—which is more painful during menses than at any other time, we must be pretty sure that a continuation of the treatment during this period will render it more efficacious and shorten its duration. I, for my part, am not as much convinced of this fact as Brandt. Following his assertions, I have tried massage without any interruption in some cases, that is, when the rectal route was the only possible one to take, and this for certain reasons. I did not notice that the absorption was, at least, not in any notable way, more rapid than under other more favorable conditions.

It is necessary to warn the patients that the sensibility of the massaged parts is always increased after the first few séances. This disappears, however, very soon, and after a week or fourteen days at the utmost, the sensitiveness is by far less.

In rather difficult cases, which require a great deal of strength, the masseur will do well, instead of sitting at the left side of the patient, to stand up with his body half inclined. In this position he can display the greatest amount of strength with the least fatigue. This consideration deserves mention, because it is sometimes necessary to use a great deal of force, especially when the exudates are old and hard and the physical conditions not favorable.

Besides local pain, the manipulations sometimes cause, as they do in uterine massage, more or less painful sensations in the neighboring or even distant organs. These pains may sometimes, fortunately only rarely, be so acute as to cause a great deal of complaint on the part of the patient. I have had to deal with cystalgia, with vesical tenesmus and sensation of pain near the rectum. Some persons felt pain in the region of the left ovary when the right side was being massaged. Others experienced very painful, lancinating pain in the epigastric region. These sensations are very capricious, they are not felt at all during some séances, and may be very pronounced during others.

Generally I have one séance a day. Two or three would be desirable if we had to deal with old, hard and almost insensitive exudates or with remnants of exudates. The treatment lasts from about a fortnight to ninety days, or even longer. The average duration is from three to six weeks. The results obtained in parametritis are at least as good as, and very often even better, than in metritis.

The large exudates, particularly if they are at the same time very hard, are the most obstinate ones. Perhaps it is possible to remove them in some cases by means of massage with one hand or both through the abdominal wall. But it is very rare, when the size of the exudate is to a certain degree diminished, that we are not obliged to place one or two fingers into the rectum or the vagina as support and to control the strength displayed by the hand massaging through the abdominal wall.

122 EAST THIRTY-FOURTH STREET.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at frequent intervals. So far as they have been decided upon, the further questions are as follows:

XLVII.—How do you treat whooping cough? (Closed February 15, 1906.)

XLVIII.—How do you treat pruritus ani? (Closed March 15, 1906.)

XLIX.—How do you treat lumbago? (Answers due not later than April 16, 1906.)

Whoever answers one of these questions in the manner most satisfactory to the editors and their advisors will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but not required) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLVI has been awarded to Dr. James Porter Fiske, of New York, whose article appeared on page 401.

PRIZE QUESTION NO. XLVI.

THE TREATMENT OF SPRAINED ANKLE.

(Continued from page 508.)

Dr. Merrill A. Swiney, of Bayonne, N. J., remarks:

It is convenient in treating sprained ankles to divide them into three classes:

(1) Those cases in which the patient comes into one's office complaining of pain and soreness, with a history of just having turned on his ankle. He can walk with a limp, and the ankle is slightly swollen and tender.

In such cases I have an assistant firmly hold the foot at right angles with the leg. Having cut adhesive plaster strips one inch wide, and of sufficient length to extend from under the foot to one and one half inches above the malleoli (zinc oxide plaster is the best, as it does not irritate the skin). I strap the ankle in the following manner: I place the centre of a strip of plaster on the inferior aspect of the heel as far posteriorly as possible, and firmly bring it up on each side posterior to the malleoli. Then I place a second strip similarly on the posterior aspect of the heel, and bring it forward on the sides of the foot. These two strips are at right angles with each other. I alternate, each strip overlapping half the previous one until the strips extend one inch above the malleoli. If the first two are properly and firmly placed, the rest of the strapping is easily done. I leave a space of a half inch in front so as not to obstruct the venous circulation. After the patient puts on his stocking and shoe, he is able to walk. I instruct him as soon as he reaches his home to elevate his foot and place an ice bag on each side of his ankle (best done in

bed) until the next day. Unless his occupation necessitates his standing on his feet, he will probably be able to go to work the following or second day. Aside from an occasional slight pain and a little stiffness, his ankle will be well. In a week or ten days I remove the straps.

(2) In this class I include those cases in which the ankle is considerably swollen and the patient is suffering a great deal of pain, and those in which the patient is past middle life and the circulation is poor.

In such cases I order the patient to bed, elevate the foot, and surround the ankle with ice bags to remain on for two hours, and then to be removed for one hour, until the swelling has disappeared, which is usually in four or five days. After this I strap as in cases of the first class; the result is likewise good, but more prolonged.

(3) In this class I include those cases in which the injury is severe, the laceration of tissues considerable, the swelling very much, and perhaps splinters of bones are torn off.

In these I elevate the leg and apply ice bags to reduce the swelling and pain. (In rare cases it is necessary to give morphine hypodermically, one fourth grain with atropine, $\frac{1}{150}$ grain.) In four or five days the swelling is reduced. I then apply a plaster cast, taking care to have the foot in its proper relation to the leg, as in these cases a fracture is often overlooked. I then examine the ankle with the x ray, and finding everything in position, leave it in the cast for about two weeks. I then strap and allow the use of the foot as in preceding.

In all injuries of this nature massage for fifteen or twenty minutes twice a day for a month or two is always of great advantage. If, as is often the case, in the second and third class of injuries, the ankle remains weak, and wearing of a silk stocking or anklet is a great protection. If the tissues remain thickened, and the joint stiff, painting with iodine will give relief.

No class of injuries has given me greater satisfaction than sprained ankles treated according to the above principles.

Dr. Frances C. Turley, of Chicago, says:

The ankle is usually sprained by inverting the foot, stretching the capsular and external ligaments even to the point of rupture of one or both. The rupture usually occurs at the point of attachment of the ligament to the bone. The capsular ligament on the inner side of the ankle joint may be pinched, between the articular surfaces, giving rise to tenderness at this point.

The best method of treatment is by properly applied adhesive plaster strips, at once, if the case is seen immediately, or after twenty-four hours of preliminary treatment if the case is not seen until there is considerable swelling. The preliminary treatment consists in rest in bed with elevation of the foot and cool moist dressings. Adhesive plaster of the zinc oxide variety is the best. The strips should be three quarters of an inch wide and twelve and fifteen inches long for an averaged sized adult foot. The leg should be shaved to be free from hair.

Beginning with a fifteen inch strip, place one

end half way between the knee and plantar surface of the heel in such a position that the outer border will follow the tendo Achillis. Fix about four inches firmly. Evert the foot strongly. Keep the plantar surface at a right angle to the leg. An assistant is useful here. Now fix the plaster firmly along the tendo Achillis, under the heel, and upon the inner surface of the ankle, allowing it to fall smoothly. Next take a twelve inch strip, fix one end at the base of the little toe, allow the outer edge of the plaster to follow the junction of the dorsal and plantar surfaces of the foot, backward around the heel to the inner side of the ankle. Take a second fifteen inch strip, start the end even with the first, allowing this strip to overlap the first about one sixth of an inch, keep the foot in position and fix the plaster around to the inner ankle as before. Take a second twelve inch strip, start even with the first, using a one sixth inch overlap and apply as before. Continue this alternate application until the ankle is covered to or almost to the median line in front. Bandage with a two inch gauze bandage. The patient can walk with this dressing.

Reapply the dressing as often as retention and hygiene require, continuing the application until soreness and weakness are gone, which will take usually from four to six weeks.

This dressing can be applied to the inner side of the ankle after the same manner. The principle is support of the stretched or ruptured ligaments.

Dr. Edwin Reissman, of East Orange, N. J., says:

A true sprain is always attended with more or less laceration of the ligaments which causes effusion of serum and blood. The treatment applied, must therefore, have the following objects in view: First, the arrangement of the joint, inhibiting unnecessary and incautious movements, thus preventing greater injury. Second, limitation of the effusion and swelling.

The Gibney dressing, applied at once, is most satisfactory in accomplishing these results and has the further advantage of permitting immediate use of the foot. This dressing is prepared of one inch adhesive plaster straps eighteen inches long, one and one half inches wide. The first strap is started four inches above the malleolus on the affected side, runs down by the edge of the tendo Achillis, passes across the sole obliquely to the base of the big toe, if sprain is external, or if it is internal, to the base of the little toe. A number of such straps, each overlapping the other, are applied until the whole affected side of the ankle is covered. Then, the other series, the heel straps are applied; the middle of the strap is placed at the point of the heel and the ends carried to a point at the junction of the tarsal and metatarsal bones. A number of such straps overlapping one another are applied above this until the ankle joint is covered. The straps should not meet in front to prevent constriction of the foot. The patient is then advised to walk on his foot, but moderately.

Gentle massage and passive motion must not be neglected and for that and the reduction of the effusion renewal of the dressing is indicated.

The above properly done tends to an early cure and chronic sprain is avoided.

If for any reason a Gibney dressing cannot be applied at once, hot applications or a wet dressing will give temporary relief. As soon as practicable a Gibney dressing should be applied.

Dr. James A. Randall, Assistant Surgeon, United States Navy, states:

In sprains of the ankle the indications to be met are, relief of pain, reduction of swelling, and absolute rest of the injured tissues. In many cases all of these indications may be met by the immediate application of a light plaster of Paris cast. There may be, however, too much swelling present to allow the application of a cast, in which case I envelop the joint in cloths saturated with ice cold lead and opium solution, keeping the foot elevated and supported.

Sometimes heat is more grateful to the patient than the cold applications, and I have him immerse his foot in a tub of hot water for at least half an hour, maintaining the temperature as high as can be borne, then the foot is taken out and the joint surrounded with hot fomentations of lead and opium, and bandaged for support.

When the primary swelling has been somewhat reduced, and the pain lessened, I apply a plaster cast, and the joint is allowed to remain in this from three days to a week, according to the severity of the injury. At the end of this time I cut the cast down in front, remove it, and examine the joint, at the same time giving it passive movements and massage. Then the cast is reapplied and strapped into place with adhesive plaster. The cast can then be easily removed daily for examination and massage of the joint, after which it is replaced.

When the ligaments have had time for repair, I take off the splint and strap the ankle with one quarter inch adhesive strips to support the injured tissues. I then allow the patient to wear a comfortable shoe and begin to use the foot.

In case there is stiffness of the joint after the removal of the cast I give passive motion and massage to the joint daily.

The swelling of the joint, under use, may persist for some time, but will disappear under daily friction with some stimulating liniment and the use of a shoe which properly supports the ankle.

Dr. Shirley Wilmotte Wynne, of New York, writes:

The treatment of sprained ankle may well be divided into the immediate and the subsequent. The former resolves itself into the general and local and has a fourfold object: First, the elimination of the inflammation. Second, the removal of the inflammatory products. Third, the prevention of deformity; and, fourth, the perfect restoration of function.

The inflammation is to be limited by rest and proper position. Park claims this alone is often sufficient to cut short an attack. The affected foot should be raised from the floor; the patient either being put to bed or placed in an easy chair and the foot supported upon a stool or another chair.

A tight flannel or elastic bandage should be ap-

plied over a thick layer of cotton and the foot held fixed by a splint, preferably of a removable character, to allow of inspection and further treatment. Cold may be applied by means of ice bags. When the pain will not permit of such pressure, a gauze bandage may be applied as snugly as can be borne over a layer of absorbent cotton and the dressing kept saturated with lead and opium wash, aluminum acetate, ammonium chloride, etc. Increase the pressure as the acute symptoms subside. If after two or three days the acute symptoms continue or increase, change to hot applications: hot water bag, Leiter's coil, etc., may be used.

Pressure is all important, as it supports the joint, limits the amount of fluid, prevents over-distention, which is the most salient cause of persistent swelling. A splint should be applied as soon as the case is seen; it affords the patient a great deal of relief, as it prevents painful movements of the limb; and, as will be seen later, guards against deformity. Should the joint contain much exudate, this should be removed by aspiration which, needless to say, must be done under most aseptic conditions.

As the acute symptoms subside stimulating measures are called for: iodine painted on twice a day; ichthyol fifty per cent., or blue ointment, applied with gentle massage from periphery towards body; the rubbing to be more vigorous each day; if it increases the swelling, stop for a day or two, then begin again.

If these fail to reduce swelling, repeated blisters or Paquelin cautery often causes a rapid and permanent reduction. Should these measures, however, meet with no better results, aspirate, making an oblique puncture through the soft parts; while, of course, we cannot hope to remove all the fluid, we can remove sufficient to lessen the interarticular pressure to a degree compatible with absorption by the synovial membranes. The injection of a carbolic acid solution of five per cent. to the distention of the joint and allowing one or one half drachm to remain in the cavity is rarely necessary.

Deformity is to be prevented by giving the foot a proper position from the first; that is, one of dorsal flexion and adduction. This is especially important as there may be a fracture hidden by swelling, etc. Probably the best splint is made of plaster of Paris; cut down the median line anteriorly to permit of removal for inspection and further treatment. But this should never remain on longer than a week or ten days, even in mildest cases, for fear of ankylosis. Tin or papier maché splints may be used instead.

Restoration of function: As soon as the height of the inflammation has been thoroughly passed, we begin passive motion. If the joint be stiff, it should be moved forcibly, under an anæsthetic, if necessary.

Hot air ovens are valuable, when attainable, in both recent sprains and the swelling, pain, and stiffness following. The part is subjected to the heat one hour daily. The pain often disappears after the first or second treatment. Between treatments, the foot is kept in a splint and massage and ointments may be employed.

In mild sprains the immediate application of splint and firm pressure by means of flannel, or elastic bandage over layer of cotton, or Dr. Gibney's adhesive plaster strips is often all that is required.

After treatment consists of exercise and massage to strengthen the muscles and ligaments about the joint. The use of elastic or leather supporters for a shorter or longer time are, at times, helpful and even imperative, but it certainly seems more sensible to endeavor to strengthen the parts themselves than to rely upon these artificial measures.

Dr. William J. Chandler, of South Orange, N. J.,

For convenience of consideration sprains of the ankle may be divided into two classes: (1) Recent; (2) old or chronic. The recent cases may be subdivided into (a) slight, (b) severe.

The keynote to the treatment of recent sprains is rest, absolute rest for the joint and for the soft parts connected therewith.

(a) Slight sprains are those in which the ligaments and soft parts are not materially ruptured, but only stretched, hyperdistended. If such a case is seen immediately after the accident a gauze bandage should be at once applied to the foot, ankle, and lower third of the leg. Several turns of a figure of eight bandage around the ankle will sufficiently immobilize the joint. The patient should then be put to bed and kept there for from one to three days. If there is pain, the bandage should be thoroughly wet and kept moist. After three days the bandage is removed. If the pain and swelling have gone, a basket dressing of adhesive plaster is substituted for the bandage and the patient is allowed to bear weight on the foot. If after a few days no pain has followed the slight use of the foot the patient is allowed to resume his usual vocation, provided it does not involve immoderate use of the joint.

(b) Severe sprains are those in which the ligaments are partially or completely ruptured and the soft parts more or less lacerated. In these cases the primary rest is prolonged, according to the time required to subdue the pain and swelling. It is my rule not to allow the patient to bear the weight on the foot, until the pain and swelling have entirely disappeared. Then with the support of a basket dressing he can begin to rest the foot on the floor and to go about with the aid of crutches, swinging the injured foot clear of the floor. Gradually the crutches are laid aside and the whole weight borne on the foot. The time required cannot be determined beforehand. The rule is to use the foot gradually more and more, but never sufficiently to produce pain or aching. Under this treatment most cases will make steady progress and complete recovery. Patients often rebel at the duration of the enforced rest, but any other plan will require more time in the end and give less perfect results.

Unfortunately all patients do not immediately present themselves for proper medical attention. They try to treat themselves. They limp about as best they can for a few days or a few weeks until their unsatisfactory progress compels them

to seek advice. These cases generally require a few days of rest. Then the whole extremity below the knee should be put up in a firm dressing, such as plaster of Paris or sodium silicate. When this cast has set it should be cut longitudinally into two halves, which can be removed and replaced. This permits bathing, application of tincture of iodine, and other local treatments. With this dressing the patient can go about with crutches. A thick sole and heel should be put on the shoe of the well foot, so that the toe of the splinted limb may not touch the ground. This splint should be worn for a month or six weeks. When it is finally removed, if there is any stiffness about the joint passive motion, showering with water, gentle frictions, etc., will complete the cure. A silk anklet worn during the day gives great comfort, and support to the joint.

(2) Chronic sprains.—Sprains improperly treated or neglected for months or years constitute the class called chronic sprains. They require treatment diametrically opposite to that appropriate for recent cases. Exercise, and not rest, is the basis of treatment. Motion, both active and passive, massage, friction, stimulating applications, electricity, etc., will restore motion and strength to the ankylosed joint, unless too great a degree of atrophy has taken place. Frequently the general health in these cases demands careful attention.

Dr. W. L. Conklin, of Rochester, N. Y., writes:

I was led to adopt the following method by reading a description and commendation of it in one of our medical journals, about ten years ago. Results secured have been very satisfactory, even in severe cases:

The ankle and foot are first bathed with alcohol and thoroughly dried. Strips of zinc oxide adhesive plaster one inch in width are then cut in proper lengths and applied as follows: Beginning on the dorsum of the foot just back of the great toe the first strip is carried along the junction of the dorsal and plantar surfaces, around the heel, and to a point about one inch to the outer side of the starting point. The remaining strips are applied with a one half inch lap, as clapboards are used in constructing a frame house. If the upper border of each strip is cut with the scissors when applied around the heel a perfect adaptation to the surface is secured. As the ends of the strips do not come together on the dorsum of the foot there remains a surface one inch wide uncovered, and possible interference with the circulation is thus avoided. The strips surrounding the ankle are reinforced on both sides by several short perpendicular pieces, and a roller bandage of cotton flannel is applied to the foot and ankle.

After the application of this dressing I advise the patient to keep quiet for two or three days, with the foot elevated, and then to walk about the room at first, and a greater distance as lessened pain permits.

After three or four days the adhesive plaster cast is removed and fresh strips applied as before. It is seldom necessary to repeat the process more than three times.

(To be concluded.)

Therapeutical Notes.

Successful Treatment of Tetanus Following a Wound of the Head.—Minet and Gaehlinger (*Le Nord médical*, February 15, 1906) report a case of a man, who fell upon a harrow and cut his head at a point 2 centimetres behind the right eyebrow. The wound was neglected and suppurated. At the end of eighteen or twenty days the discharge of pus suddenly ceased. At the same time trismus appeared. Admitted into the hospital, it was found that, at the site of the injury, there was a tumefaction, the size of a large nut, in which there was a small opening which discharged fœtid pus. Examination showed the presence of tetanus bacilli, both free and in the polymorphonuclear leucocytes. The trismus was very marked; there was intense dysphagia and right sided facial paralysis, superior and inferior. The wound was opened, cleansed, and disinfected. A mixture containing chloral hydrate 12 grammes and morphine hydrochloride 0.04 gramme was given. At the same time two injections of antitetanic serum were made. On the second day, in addition to the right facial paralysis, there was also paralysis of the upper eyelid (ptosis). The condition of the patient gradually ameliorated from this time onward. The ptosis went away three weeks after its first appearance. The facial palsy and the trismus also diminished, little by little, and had almost completely disappeared when the patient left the hospital at the end of four weeks. [The report fails to mention any treatment after the first day, and whether or not the antitetanic injections were repeated.]

The Autoinoculability of the Syphilitic Chancre.—At the January meeting of the Société de dermatologie et de syphiligraphie, Queyrat presented a patient who had two chancres, one of fifteen, the other of twelve days' duration. From the latter, Queyrat had made inoculations upon the patient's arm, and at the same time had made sterile punctures on the other arm for comparison. The latter produced no effect, whereas the chancreous inoculations were followed by the appearance of three little chancres, accompanied by a slight adenopathy. Chancre, therefore, he claims, is inoculable upon the syphilitic subject himself, but it is necessary in order that the inoculation may succeed, that the first chancre shall have less than twelve days' duration and that the patient shall not have had any treatment, local or general. Under these circumstances a positive result can be obtained twice out of three times. Roux and Metchnikoff, from experiments upon monkeys, at first thought that immunity was complete within forty-eight hours. Queyrat has always claimed that it was progressive and came on slowly, as shown in the present case. In this opinion, Metchnikoff and Roux now concur. It having been observed that the lesions provoked by inoculation presented neither ulceration, induration, or notable adenopathy; the author points out the fact that this is to be expected, and is always the case when a chancre is modified by its development in an organism already infected. The same has been observed in

vaccination, where reinoculations become more attenuated in proportion as they are later. At all events, if the arm lesions were not real chancres, it must be admitted that reinoculation from a recent chancre may give rise to specific lesions, a fact which hitherto has been doubted.—*Journal de médecine interne*, February 1, 1906.

Fatal Intoxication from Mercurial Injection.—Le Noir and Camus reported to the Société médicale des hôpitaux (*Le Progrès médical*, January 20, 1906) the case of an adult who received seven drops of gray oil by subcutaneous injection, four times during the course of a month. Three days after the fourth injection a stomatitis developed which one month later became ulcerogangrenous, with albuminuria, diarrhœa, fever, wasting, and cachexia, and finally death followed. At the autopsy were found lesions of severe enteritis and of acute toxic nephritis. The unfortunate patient appeared to have an idiosyncrasy for mercury, but the case illustrates the possible danger of injecting insoluble preparations of mercury. In the discussion, Queyrat declared that he treats from six to seven thousand syphilitics annually with gray oil, and has never met with a serious accident. Brocq said that the kidneys should be watched, and in cases of secondary nephritis he substitutes soluble salts and refrains from giving the insoluble preparations. Faisant suggested that the latter should be reserved for tertiary manifestations; whilst, in the secondary period, he believed that the soluble salts are sufficient. Antony made the objection to the insoluble salts that they did not admit of dosage sufficient, and that they are often followed by abscess and neuritis. The latter complications were attributed by others to faulty technique. Calomel, in the opinion of Thieberge, often gives rise to abscess when injected. Sicard (at the following meeting) also reported a case of a young man in which very serious symptoms of intoxication supervened after four injections of gray oil. These injections had been made at intervals of one week, and the total quantity of mercury injected was not more than thirty-five to forty centigrammes. Examination of the buttock showed a voluminous nodosity, and the exposure to the x rays demonstrated the existence of a collection of metallic mercury. After the removal of this nodosity and its contents all the toxic phenomena disappeared.

The Laxative or Purgative Action of Alphanaphtholphtalein.—Lemoine and Caudron have ascertained that the alphanaphtholphtalein is purgative in its action on man. Vamossy, in 1902 (*Thérapie der Gegenwart*), had shown that phenolphtalein is purgative in doses of from 0.15 to 0.20 gramme. Brissemeret pointed out that when the phtaleins are swallowed and taken into the digestive tract, they combine with alkaline salts, particularly in the intestine, and becoming subjected to repeated modifications in their molecular constitution, produce a salt having a ketone quinonic function, which confers upon the drug purgative properties. Lemoine and Caudron, from their experiments with alphanaphtholphtalein, have found that this compound also possesses purgative properties. They claim that it

is entirely free from toxicity. (Doses not given.) The alphanaphtholphtalein is obtained by the action of phthalyl chlorid upon alphanaphthol. It is a grayish green powder, insoluble in water, but soluble in alcohol. It is free from odor and taste. Experiments upon the human subject with this agent were made, commencing with very small doses, and gradually increasing until the purgative dose was reached. In cases of chronic constipation, in neurasthenia, and in women especially, the agent produced comparatively rapid results. In the laxative dose the action of the bowels usually takes place in three or four hours in men; in from two to three hours in women. The stools are semiliquid, with little odor. The remedy was also given to infants and, although the dose was very small, there was always obtained, within an hour or an hour and a half, a stool of almost normal appearance, without special odor or color; the movement being obtained without evidences of pain, or of colic as manifested by the child. A double dose caused two, three, or four movements, slightly liquid, with mucus, blood, or false membranes. The discharges never smelt offensively. The clinical experiments upon thirty cases of all ages demonstrated that alphanaphtholphtalein possesses laxative and purgative properties; that its laxative action is shown quickly, that it is free from danger, since its repeated administration for several days in succession did not produce any disturbance of the organism. The purgative effects in certain cases comes on more slowly and produces several discharges from the bowel, which are free from foetidity; in other cases, it is more rapid and produces only one or two motions of the bowels, the discharges likewise being free from their usual foetidity. It, therefore, acts at the same time as a purgative of moderate activity, and also as an intestinal antiseptic; but without causing colic or pain.—*Le Nord médical*, February 15, 1906.

Sodium Iodate in Cerebrospinal Meningitis.—Professor G. Edlefsen (in *Berliner klinische Wochenschrift*, January 29, 1906), from clinical investigation and an experience of several years, speaks very highly of the sodium iodate in cerebrospinal meningitis, thus confirming the favorable opinion of this agent expressed by Ruhemann in 1894. Edlefsen reports several cases illustrating the remarkable influence of sodium iodate in cerebrospinal fever. He gave it in doses of from 0.1 gramme every two hours in a child, two years old, to 1.5 gramme a day in an adult. It was usually given to the latter in tablespoonful doses of a two per cent. solution, three times a day. Although he has thus far only used it by the mouth, he considers it advisable to supplement this method by subcutaneous injection of the remedy, especially where the patient suffers with persistent vomiting. For the latter symptom in preference to opium or morphine, he recommends the potassium bromide. He also uses ice bags to the frontal region and to the back of the neck for relief of the headache, and highly commends this expedient, finding it rarely necessary to give opiates for the relief of pain. He

considers it a great advantage in the treatment of this disease, especially in children, if the use of opiates can be avoided. In some cases the patients were given the potassium bromides or sodium bromides for a short time, exclusively, before commencing the sodium iodate treatment. As the vomiting is an early symptom and yields very promptly to the bromide, it is not, as the rule, necessary to continue it beyond the first few days. The above treatment does not exclude lumbar puncture for the relief of those severe cases in which it is now practised; but it is believed that it will reduce the necessity for the frequent repetition of this operation. He agrees with Ruhemann that the subcutaneous injection of the remedy is better than the administration by the mouth, especially where the patient objects to being disturbed, or where there is great irritability of the stomach. It is advisable to get the treatment started as soon as the diagnosis is made. "The earlier that the patient is made to experience the very remarkable bactericidal power of iodic acid, just so much more may we confidently expect to render the entire course of the disease milder and to render it shorter; and so much the more may we hope to avoid the notable sequelæ of meningitis, especially the deafness and persistent brain disorders." It cannot be a mere coincidence, declares Edlefsen, that out of twenty-three cases, the most of which were treated with sodium or potassium iodide, and a few with sodium iodate, there were only two that presented disturbances of this character; one was a girl of nine years of age, who had persistent weakness of mind; the second was a female infant of eighteen months, who became deaf in both ears.

Sodium Iodate in Enlargement of the Glands.—In the article referred to in the paragraph preceding this, Edlefsen also reports a case illustrating the influence of sodium iodate in reducing enlarged lymphatic glands of the neck. It was believed that they were not tuberculous, but the ætiology and pathology of the enlargement were not clear. The case was that of a woman, twenty-six years old. Before coming under treatment, applications of iodoform salve had been made for a long time and potassium iodide taken internally; but without effect in reducing the swelling. A five per cent. solution of sodium iodate was ordered, of which a tablespoonful was taken three times a day. In a fortnight a marked improvement was noticed, and the remedy was directed to be continued, as it caused no disturbance of digestion. At the expiration of a month the diminution was so evident that the remedy was continued in smaller doses. The general health had also improved. In the course of a couple of months, all trace of the swollen glands had disappeared. As a result of exposure to cold, the glands, some months later again became enlarged, but a repetition of the treatment caused them to again disappear. The author recommends sodium iodate highly for all cases in which it is desired to bring into service promptly the greatest possible and most energetic action of iodine.

NEW YORK MEDICAL JOURNAL

INCORPORATING THE

Philadelphia Medical Journal
and The Medical News.*A Weekly Review of Medicine.*

Edited by

FRANK P. FOSTER, M. D.,
and SMITH ELY JELLIFFE, M. D.*Address all business communications to***A. R. ELLIOTT PUBLISHING COMPANY,***Publishers,***66 West Broadway, New York.**PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, MARCH 17, 1906.

A POINT ABOUT TUBERCULOUS DISEASE.

The struggle with tuberculous disease grows more and more acute, and every advance step is worthy of record. That Robert Koch has lost none of his interest in the campaign begun with his discovery of the microscopic foe is shown by a recent discussion by him (*Deutsche medizinische Wochenschrift*, February 3rd), which in no uncertain manner strikes a note worthy of attention, not only for Germany, but for our own country as well. Send the early cases to sanatoria and cure them, he says; send the advanced cases to hospitals and cure them if possible, but at all events keep the patients from infecting others, and do not let them die in their own homes at any cost.

It is true all of this is being done more and more every year; cases are being diagnosticated earlier, sanatoria to treat them are multiplying all over the country, and States, cities, and towns are building hospitals for the hopelessly advanced cases. These measures will dispose of two classes of consumptives. There remains, however a very large number who do not fall into either of these divisions, incipient or advanced. These patients are denied admission to sanatoria, but are not so far advanced as to be candidates for a hospital for incurables; those who for some reason or other cannot leave their homes, but could be cured or at least temporarily relieved if they only knew how to live at home. How to handle this group is the subject on which Koch speaks so strongly.

After all, entirely aside from the clinical aspect

of the question of how to cure tuberculous disease, and regarding consumptives solely as a menace to the community by spreading the disease, if we are to stamp out this scourge we must get rid of the foci of infection, and make patients who are at present a danger to the community no longer so. How is this to be done? Koch tells how they deal in Europe with the great mass of consumptives who do not fall into either of his categories.

Calmette first suggested free dispensaries for poor consumptives, where food and medicine could be obtained and advice be given; Van Pütter and Kayserling in Germany went further and proposed forming so called "Fürsorgestellen," dispensaries, not so much for medicine and food as for purposes of education and advice. They were to be literally "advice and precaution stations." These are being formed throughout the country. The consumptives are followed into their own homes, and they and their families are given instruction as to what the disease is and what they must do to get rid of it.

At present in this country there is much to be done along this line. Boards of health do or in some cases do not do good work; societies and leagues do more, and their value is great, but as a general thing their work does not come close enough to the home and too little attention is paid to details and to individual training.

Recently in Boston an attempt has been made, quite independent of the same sort of work that Koch describes in Germany, to establish real "care and advice stations," or, as they are called, "tuberculosis classes." Last July, under the auspices of one of the large churches, a class was formed with one or two members which has since so grown that a waiting list is necessary and the number of applicants is constantly on the increase. There are weekly meetings at which, by means of careful home records, every detail of the past seven days is thoroughly reviewed and the patients are kept under strict supervision by frequent visits of an intelligent nurse. Already this class has over thirty consumptives of the kind of which Koch speaks. Whether or not the patients are cured or only relieved, is of small moment compared with the fact that each one is a centre of education among his friends and neighbors; results are beginning to show and five or six new classes are being formed along the same lines as this first one, each of which will carry the details of right living into the homes of the people. These patients are not in the early stages, carefully selected, and the percentage of cures will be small, but the results in an educational way will be permanent. New

York, under the various charity organizations, has gone even further in this class of work, but the needs for extension throughout the country are great.

THE POLLUTION OF NEW YORK BAY.

Though we may reflect with pride that the griminess of the waters adjacent to New York is largely the result of the city's magnificent commerce and transportation, we can hardly wonder that the denizen of Bermuda, for example, is inclined to revile us openly on account of it when he remembers the beautifully limpid water that bathes his native island. We suppose it is impracticable to preserve the pristine purity of metropolitan waters, but we should not on that account neglect any reasonable measure to reduce the effects of pollution to the minimum. We are glad to learn, therefore, of the extended existence of the New York Bay Pollution Commission, which has been continued to April 30th of the present year.

The present commission spent two years in investigating the questions at issue, at the same time using its influence to discourage new projects involving further unnecessary contamination, and made a report to the governor of the State in April, 1905, at which time it also presented a scheme of legislation in the form of a bill, but this was not introduced into the legislature, because the session of that body was too near its close. Considerable additional information has convinced the commission that its bill ought to be passed by the present legislature. In the mean time it recommends the formation of a new commission, to act in conjunction with a similar body that the State of New Jersey would be asked to appoint, the joint commission to spend two or three years in laying out an outline plan for the formation and government of a permanent metropolitan commission representing the two States and having power to plan for the future disposal of sewage and other polluting material that now find their way into the waters of the harbor.

The commission's purpose is certainly laudable, and we believe that its scheme of a permanent body is one that ought to be adopted by the legislature. We learn that its bill, a copy of which we have had the opportunity of examining, has not yet been introduced into the legislature, but we hope that it will soon be presented and passed. The matter is not merely one of æsthetics. Such pollution as now exists in the waters adjacent to New York, and has existed for years, can hardly fail to count for something in the conveyance of disease. Observation shows

that the contaminating material is not corrected by the water so thoroughly or so promptly as to render it innocuous, and pathogenic elements contained in it are almost surely carried to great distances without having appreciably lost their virulence. They are doubtless carried as far north as Poughkeepsie, and the gross evidences of their presence have long been plain to cursory observation on the shores of Long Island, Staten Island, New Jersey, and Connecticut.

THE SUPERVISION OF EMIGRANTS AT HAVRE.

It should be a matter of congratulation among ourselves that the precautions carried out in European ports at the instigation of our government are in at least one port, Havre, so thorough as compared with the supervision of emigrants practised in the interest of France herself as to have led some of our professional brethren in that country to call attention publicly to the need of protecting the French people against the spread of contagious and infectious diseases by persons who go to Havre for the purpose of embarking for America.

At a recent meeting of the French Academy of Medicine (*Progrès médical*, February 17th) M. Chantemesse and M. Borel remarked that England and the United States were the two countries that most insisted on the necessary precautions. Armed with his ordinance, they said, the United States consul at Havre obliged the navigation companies to detain in port for a period of at least five days all emigrants from a region in which there was cholera. Naturally it is the suspects—and the question is not alone one of cholera—that give the greatest amount of trouble to the French. It seems that at Havre the isolation facilities are very defective, amounting, one might say, to none at all. Detained emigrants therefore are practically free to go and come according to their pleasure during the period of their detention; they are simply debarred from sailing. True, there is a dispensary service for the treatment of emigrants actually affected with some contagious disease, but such of them as are able to be about are merely required to report daily for examination and for such continued treatment as may be thought necessary.

It is evident that the resident population of Havre runs great risk of widespread contagion from these emigrants, and Chantemesse and Borel say with quite justifiable irony: "Is it not admirable that we take such care for the public health of the United States and are so careless for our own?" Surely the mere statement of the case ought to be enough to induce the muni-

city of Havre to look out adequately for the protection of the residents against the spread of disease from emigrants. However, it seems to be difficult to identify them on their arrival, for they generally go to Havre by land, so that it is not until the American authorities intervene that measures suitable to the situation can be taken. But probably only a short time elapses as a rule between the arrival of an emigrant in Havre and his examination by the American officials. If as a result of that scrutiny he is denied transportation, French supervision of a rigid character ought to be exercised at once.

THE BACTERIOLOGY OF COW'S MILK.

Several papers of medical interest were read at the meeting of the Society of American Bacteriologists held on December 28th and 29th upon the subjects of the bacteriology of milk and cheese (*Science*, February 9th). Dr. Francis H. Slack, first assistant bacteriologist to the Boston Board of Health laboratory, contributed a paper on the estimate of bacteria in milk by microscopical examination of sediment obtained by means of the centrifugal apparatus. By a rough estimate he has found that each coccus, diplococcus, or chain, in a one twelfth oil immersion field, represents 10,000 bacteria in a cubic centimetre in the sample of milk examined. Dr. Slack believes the method can, in experienced hands, safely be used for certifying milk, especially in certifying those samples in which no bacteria are found, the large number of samples which could be examined, and the increased efficiency of the supervision, more than compensating for a slightly greater accuracy in plate counts. The recognition and quantitative determination of leucocytes in milk and the prompt detection of producers marketing milk from cows with inflamed udders would seem to be incidental to the method.

W. M. Esten, of the Wesleyan University, reported on the lactic acid bacteria. As a result of recent investigations, it has been determined that there are two distinct groups of lactic acid bacteria, those that form gas and those that do not. The first and relatively unimportant group consists of the *Bacillus coli communis*, which is not very generally found in milk, and the *Bacterium lactis aerogenes* with all its varieties (*Bacillus acidi lactici* of Hueppe). The second group is that of the facultative aerobic bacteria. Their function seems to be principally the production of lactic acid. The *Bacterium lactis acidi* of Leishman, with its varieties, in the opinion of Esten, is the only species belonging to this group, though there possibly may be others. We consider this organism in reality as highly beneficial. Milk which

does not contain it becomes a dangerous product if kept for any length of time. *Bacillus lactis acidi* in the course of its growth destroys all kinds of putrefactive bacteria and disease germs. In fact, "every properly ripened cream with the most desirable flavor, and every normally ripening cheese, has from 90 to 99 per cent. of this organism present."

P. G. Heineman, of the University of Chicago, takes somewhat different ground, and assigns to the streptococcus group the most important place in the souring of milk. He maintains that all so called lactic acid bacteria belong to two groups, the colon aerogenes group and the streptococcus group, and asserts that the *Bacillus acidi lactici* is a myth. The ordinary bacteria producing lactic fermentation, in his opinion, are *Bacillus aerogenes lacticus* and *Streptococcus lacticus*. The possibility of *Bacterium coli* participating in lactic fermentation, however, is not excluded. The *Streptococcus lacticus* of Kruse agrees in morphological, cultural, and coagulative properties with pathogenic, faecal, and sewage streptococci. The physical process of souring of milk is caused by co-operation of both groups of bacteria, and is also participated in by peptonizing bacteria, which are always present in milk. Gas is produced by *Bacillus aerogenes lacticus*, but this as a rule is held in check and ultimately stopped by the presence and final ascendancy of *Streptococcus lacticus* (Kruse). As regards the origin of lactic acid bacteria, it has been shown that they gain access to the milk with particles of cow's faeces. Artificial lactic acid fermentation in sterilized milk can be produced by the inoculation of pure cultures of bacteria of either group or, better, by the two groups combined. The *Bacillus aerogenes* being the more sensitive to the presence of acid than *Streptococcus lacticus* (Kruse), the former is present in large numbers in the initial stages of fermentation, and the latter becomes master of the field in the terminal stages. It is evident that, if it is true, as alleged by Heineman, that *Streptococcus lacticus* (Kruse) is invariably present even in fresh milk collected with proper precautions, the sanitary significance of streptococci in market milk needs further investigation. Their medical interest consists chiefly in their direct ætiological relation to intestinal disorders, especially in milk fed infants.

FOREIGN BODIES AND IRREDUCIBLE HERNIA.

In the December number of the *Medical Chronicle* Mr. E. D. Telford records a case of large irreducible and inflamed umbilical hernia in which an operation disclosed ulcerations through the

intestinal wall that appeared to have been the results of perforations by a piece of bone, apparently a portion of a rabbit's rib, which was found. "Considering the variety of ingested foreign bodies and the labyrinthine nature of the channel through old irreducible herniæ," says Mr. Telford, "it is remarkable that accidents of this kind are not of more frequent occurrence."

Obituary.

CHARLES AUGUSTUS LINDSLEY, M. D.,

OF NEW HAVEN, CONN.

Dr. Lindsley died at his home on March 9th in his eightieth year. He was born in Orange, N. J., August 19, 1826. He received the bachelor's degree from Trinity College in 1849, and the A. M. degree from the same college in 1852. While beginning the study of medicine in the office of Dr. A. J. Driggs, he was assistant to the principal of the Cheshire Academy (1849-'50). He then matriculated with the College of Physicians and Surgeons, New York, and finally completed his medical studies at the Yale Medical School, receiving the degree of M. D. in 1852. He was made professor of materia medica and therapeutics in the Yale Medical School in 1860, and held this position until 1883, when he was made professor of the theory and practice of medicine, which chair he occupied until 1897. At this time, at his own desire, he was retired from active teaching and was made professor emeritus of medicine. Besides occupying these chairs in the medical faculty, he was dean of that faculty for nearly twenty years. He was an assistant surgeon in the United States army during the civil war, serving at the Knight Hospital in New Haven and at the Lincoln Hospital in Washington.

Dr. Lindsley has always been connected in one capacity or another, first as attending and then as consulting physician, with the Connecticut State Hospital at New Haven, and was secretary of the General Hospital Society from 1865 to 1877. He was health officer of New Haven from 1874 to 1888, was a member of the Connecticut State Board of Health, which he helped to organize, in 1878, and was secretary and executive officer of that board and superintendent of registration and vital statistics in Connecticut from 1884 until the time of his death. That office he had just resigned, to go into effect April 1, 1906.

He has been president of the Connecticut State Medical Society, of the New Haven Dispensary Staff, of the New Haven County Medical Association, of the International Conference of State and Provincial boards of health, and of the American Public Health Association. It is needless to say that a man appointed to so many offices of responsibility and trust, many of which he held for years, must have been eminently fitted for such responsibilities. He did splendid work for the Yale Medical School, and even up to

the time of his final illness was giving the school the advantages of his most efficient work in public hygiene, his later lectures being confined to that subject.

He was one of the pioneers in promoting the establishment of State boards of health and the accurate report of vital statistics, and by his energies caused to be put upon the statutes of Connecticut the efficient laws that give the Connecticut Board of Health its power to do splendid work. He was untiring in tracing the cause of epidemics in whatever part of the State they might occur, and by his energetic measures had caused such epidemics to be confined to the localities in which they started. In a word, his services to the Connecticut public cannot be overestimated.

Personally he was one of the most genial of men and beloved by his patients and fellow practitioners. He was an able debater and lecturer, and a speech or talk from him was always welcomed by his hearers, whether students, practitioners, public officials, or legislators. He had always enjoyed fine health, and was rarely off duty from any cause. His last illness was of but a few weeks, and the cause of his death was a gradually failing heart from senile degeneration.

Dr. Lindsley was married April 13, 1852, to Lydia L. Harrison, of Orange, N. J., who survives him with a daughter and a son, Dr. C. Purdy Lindsley, of New Haven.

ELIZABETH NEELY BRADLEY-BYSTROM, M. D.,

OF DOBBS FERRY, N. Y.

Dr. Bradley-Bystrom, a daughter of the late Judge Bradley, obtained her professional education in Paris, where she graduated in 1887. Her career in Paris was looked upon as highly creditable; in particular, her graduation thesis, which was on the subject of iodism, received considerable attention. Soon after her graduation she came to New York and joined the staff of this journal, of which she continued a valued member until circumstances led her to change her residence to Dobbs Ferry. She was a general practitioner, but for some years previous to her decease her health was not such as to warrant very active professional work. The deceased lady was of a most amiable disposition, and she was highly esteemed by those who knew her.

DAVID DORRINGTON RICHARDSON, M. D.,

OF NORRISTOWN, PA.

Dr. Richardson, for many years chief resident physician of the men's department of the State Hospital for the Insane at Norristown, died suddenly of heart disease on Tuesday, March 6th. He graduated from the Medical Department of the University of Pennsylvania in 1871. For several years he was a physician to the insane department of the Philadelphia Hospital. He established the Delaware Hospital for the Insane in Farnhurst, and in 1893 was appointed to the Norristown Hospital.

News Items.

NEW YORK CITY AND STATE.

The Harvey Society.—The thirteenth lecture in the Harvey society course will be delivered by Professor W. H. Howell, of Johns Hopkins University, at the New York Academy of Medicine, on Saturday evening, March 17th, at 8:30 p. m. Subject: The Cause of the Heart Beat. This is the last lecture of the series given during the past year.

The Manhattan State Hospital, West.—It is stated that Dr. William Mabon, president of the State lunacy commission, is soon to resign his position in order to accept the superintendency of the Manhattan State Hospital on Ward's Island, made vacant by the death of Dr. E. C. Dent.

The Medical Society of the County of Herkimer, N. Y.—The centennial meeting of this society was held at Herkimer, on Tuesday, March 6th. The programme included an address by the president entitled, Historical Notes of Interest to the Medical Profession of Herkimer County, and a paper entitled, A Comparative Study of Nephritis, by Dr. L. L. Brainard, of Little Falls.

The Rochester (N. Y.) Academy of Medicine.—The following symposium on Diseases of the Ear was provided for a meeting held on Wednesday, March 14th: Suppurative Diseases of the Ear, by Dr. J. M. Ingersoll; Nonsuppurative Diseases of the Ear, by Dr. P. F. Sondern (by invitation); Conditions of the Nose and Throat which Cause Ear Diseases, by Dr. F. W. Bock.

The Buffalo Academy of Medicine.—At a meeting of the Section in Surgery, held on Tuesday, March 13th, the following programme was presented: A Consideration of Acute Hematogenous Infection of the Kidney, by Dr. George E. Brewer, of New York; Complications with Fracture of the Long Bones of the Wrist and Ankle, by Dr. Verner Kenerson.

Tuberculosis Wards in Bellevue Hospital.—An order has been issued by Dr. Brannan, president of the board of trustees of Bellevue Hospital, that hereafter two of the wards in the medical division of Bellevue are to be used for tuberculosis patients. This order was issued in consequence of the crowded condition of the hospital on Blackwell's Island, where no more consumptives can be received for the present.

The New York Pathological Society.—The following programme was arranged for a meeting held on Wednesday, March 14th: A Case of Congenital Heart Disease, by Dr. E. P. Bernstein; Slides from a Case of Adenomyoma of the Uterus, by Dr. D. S. D. Jessup; Specimens of Brain Tumors, by Dr. F. C. Wood; Intracellular Digestion by Phagocytic Cells, by Dr. E. L. Opie (by invitation); Isolation of Gram-negative Diplococci in Three Cases of Arthritis Accompanying Urethritis; in a Fourth Case Without Urethritis, by Dr. Thomas Flournoy.

The Medical Society of the County of Rensselaer, N. Y.—The following programme was presented at a meeting held at Troy, on Tuesday, February 13th: Demonstration of a Case of Progressive Hemiplegia or Unilateral Paralysis Agitans, by Dr. William Kirk; The Japanese Medical Corps at Home and Abroad, by Dr. D. W. Houston. The programme for a meeting held on Tuesday, March 13th, was: A paper on Intermittent Claudication Due to Angiosclerosis of the Extremities, by Dr. R. H. Irish; a discussion on the Etiology of Mastoiditis, by Dr. F. M. Salzman, and on Hernia of the Bladder, by Dr. C. F. Kivlin.

The Proposed Nurses' Commission.—Some of the most eminent meddlers with other people's business now active in public life hail, says the *Sun* for March 14th, from Brooklyn. There resides the genius who would make it a misdemeanor to follow the trade of washerwoman without a license. Brooklyn boasts, too, the statesman who would license real estate dealers. And in the same borough resides Senator Cooper, author of the bill to create a State commission to regulate nursing. The merits of the Cooper bill are found in the provisions which fix the salary of the Nurses' Commissioner at \$7,500 a year, that of his deputy at \$4,500, and that of his secretary at \$4,000. Three new, good, well paid jobs! What further arguments are necessary to convince the citizens of New York that a Nurses' Commission is the thing they need? True, such a commission is not wanted by nurses, physicians, or the public; true, it could do no good, could accomplish nothing, and

would probably open new opportunities for political oppression and financial graft; but are such small matters to be allowed to interfere with the creation of fat jobs for the faithful? The end and aim of legislation is the establishment of easy berths for the politically inclined sons of rest, and we breed a race of statesmen who understand their duties completely.

The New York Academy of Medicine.—The following was the order for a meeting held on Thursday, March 15th: Nominations for vice-president to fill the unexpired term of the late Dr. George Ryerson Fowler; Paper: A Study of the Spirochæta Pallida, with Demonstrations, by Dr. L. B. Goldhorn; discussion by Dr. Simon Flexner, Dr. Harlow Brooks, and others; The Condition of the Air of the Rapid Transit Subway, by George A. Soper, Ph. D.; discussion by Dr. Thomas Darlington, Health Commissioner; Dr. W. Gilman Thompson, Dr. William P. Northrup, Dr. S. A. Knopf, and others.

The Section in Orthopaedic Surgery presented the following programme at a meeting held on Friday evening, March 16th: Presentation of patients: (a) A Case of Disability of the Shoulder Joint for Diagnosis, by Dr. Wisner R. Townsend; (b) End Result in a Case of Congenital Dislocation of the Hip, by Dr. Wisner R. Townsend; (c) Congenital Torticollis, by Dr. Reginald H. Sayre; (d) Result in a Case of Acute Torticollis Presented at December Meeting, by Dr. Reginald H. Sayre; Paper: The Ocular Factors in the Etiology of Spinal Curvatures, by invitation, Dr. H. Augustus Wilson, of Philadelphia; discussion by Dr. W. F. Mittendorf, Dr. T. R. Pooley, Dr. Frank Van Fleet, Dr. T. H. Myers, and others.

The Section in Ophthalmology will meet on Monday evening, March 19th, with the following order: Presentation of specimens: Carcinoma of the Choroid, by Dr. Edgar S. Thompson; Paper: Some Observations on Worth's Treatment of Congenital Strabismus in Young Children, with Presentation of Cases, by Dr. Linn Emerson; discussion by Dr. Frank N. Lewis, Dr. Alexander Duane, and others.

The Section in Medicine will hold a meeting on Tuesday evening, March 20th. The following is the programme: Presentation of specimens: Congenital Defect of the Inter-auricular Septum of the Heart, by Dr. A. M. Pappenheimer; Clinical Reports: A Case of Yellow Fever, by Dr. Harlow Brooks; Papers: (a) On the Absorption of the Typhoid Bacillus from the Peritoneum, by Dr. B. H. Buxton; discussion by Dr. James Ewing, Dr. W. H. Park, and others; (b) The Albumin Bodies in the Urine; the Recognition of Serumalbumin and Serumglobulin, by Dr. Thomas W. Hastings; discussion by Dr. E. E. Smith, Dr. Harlow Brooks, and others; (c) Organic Heart Disease and Immunity from Phthisis Pulmonalis, by Dr. Bond Stow; discussion by Dr. Egbert, Dr. Le Fevre, Dr. C. N. B. Camac, and others.

The Section in Genitourinary Diseases will offer the following programme at a meeting to be held on Wednesday evening, March 21st: Presentation of patients: (a) A Case of Calculus of the Pelvic Ureter, by Dr. Howard Lilienthal; (b) A Case of Nephrectomy for Nephrolithiasis Combined with Renal Papilloma, by Dr. Willy Meyer; (c) A Case of Hypernephroma with Metastasis Following Operation, by Dr. Albert A. Berg; Presentation of specimens: (a) Multiple Renal Calculi. Secondary Nephrectomy for Renal Fistula, by Dr. Charles H. Chetwood; (b) Hypernephroma, by Dr. Albert A. Berg; (c) Two Specimens of Hypertrophied Prostates, by Dr. Willy Meyer; (d) Nephrectomy for Congenital Hydro-nephrosis. A Case of Endothelioma of the Testicle, by Dr. Martin Ware; Presentation of instruments: An Instrument for the Inspection and Treatment of the Male Bladder, by Dr. Follen Cabot; Reports of cases: An Interesting Case of Atrophy of the Testicle, by Dr. L. Bolton Bangs; Paper: Perinephritis, by Dr. Albert A. Berg.

The Section in Obstetrics and Gynecology will meet on Thursday evening, March 22nd, with the following programme: Presentation of patients; Presentation of specimens; Paper: Uterine Hemorrhages at the Menopause, by Dr. Grace Peckham Murray; Paper: Gigli's Operation (Pubiotomy) in Private Practice, with Report of a Case, by Dr. J. Schmidt; Paper: Vaginal Cesarean Section, by Dr. J. Riddle Goffe; General discussion on the management of Occipitoposterior Positions, introduced by Dr. G. L. Brodhead. Discussed by Dr. F. A. Dorman, Dr. W. S. Stone, Dr. R. A. Murray, Dr. G. Seeligman and others.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending March 10, 1906:

	March 10—		March 3—	
	Cases.	Deaths.	Cases.	Deaths.
Measles	2,384	55	1,903	45
Diphtheria and croup	436	62	405	61
Scarlet fever	250	13	222	5
Smallpox	171	..	180	..
Chickenpox	414	187	475	225
Tuberculosis	17	3	37	7
Typhoid fever	50	25	20	21
Cerebrospinal meningitis	3,702	345	3,251	364

Society Meetings for the Coming Week:

MONDAY, March 19th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, March 20th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, March 21st.—New York Academy of Medicine (Section in Genitourinary Diseases); New York Society of Dermatology and Genitourinary Surgery (private); Woman's Medical Association (New York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, March 22nd.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; New York Celtic Medical Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, March 23rd.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, March 24th.—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

PHILADELPHIA AND THE MIDDLE STATES.

Medical Inspection of the Pittsburgh Public Schools will be begun at once. The bureau of health promulgated rules on March 1st.

St. Francis Hospital of Pittsburgh has just dedicated a new building containing a ward, sixteen private rooms, and a chapel.

The Gloucester County (N. J.) Medical Society.—The programme for a meeting held at Woodbury, on Thursday, March 15th, included a paper on Points in Gynecological Diagnosis, by Dr. Wilmer Krusen.

Polyclinic Hospital, Philadelphia.—During the month of February the following patients were treated at the Polyclinic Hospital: Patients admitted to house, 103; patients discharged, 93; new patients treated in dispensary, 1,598; total visits to dispensary, 7,791; accident ward, 580.

Philadelphia Personals.—Dr. Charles H. Muschlitz has been appointed assistant physician to the insane department of the Philadelphia Hospital, male wards. Dr. Elizabeth B. Bricker has been appointed to a similar position in the women's wards. Both appointments follow civil service examinations.

American Nurses for St. Thomas's Hospital, Panama.—Sister Raphael and Sister Martha, of St. Joseph's Hospital, Philadelphia, are to go to Panama, where they will undertake to reorganize St. Thomas's Hospital. Sister Joseph, of the Maryland General Hospital, Baltimore, is another American sister who will have a share in converting the French hospital into an American institution.

Scientific Society Meetings in Philadelphia for the Week Ending March 24, 1906.—Tuesday, March 20th, Section in Ophthalmology, College of Physicians; Dermatological Society; Academy of Natural Sciences; North Branch, Philadelphia County Medical Society. Wednesday, March 21st, American Society of Tropical Medicine; Section in Otology and Laryngology, College of Physicians; Association of Clinical Assistants of Wills Hospital; Franklin Institute. Thursday, March 22nd, Pathological Society; Entomological Section, Academy of Natural Sciences; Section Meeting, Franklin Institute. Friday, March 23rd, Northern Medical Association.

The American Society of Tropical Medicine.—The third annual meeting of the American Society of Tropical Medicine will be held at the College of Physicians, Philadelphia, on Wednesday, March 21st, at 8:15 p. m. The following papers will be read, either by proxy or by title: A New Species of Parasite in Man, by Dr. Charles Wardell Stiles, of Washington, D. C.; Malaria in the Tropics, by Dr. W. C. Gorgas Ancon, Canal Zone; Clinical Notes Upon a Recent Epidemic of Dengue Fever, by Dr. Aristides Agramonte, Havana, Cuba; Tropical Neurasthenia, by Dr. W. W. King, Jr., U. S. Public Health and Marine Hospital Service; The Probable Transmission of the Germs of Yellow Fever from the Adult *Stegomyia fasciata* to Its Larvæ, by Dr. Carlos Finlay, Havana, Cuba.

The Annual Meeting of the Philadelphia Visiting Nurse Society was held on March 8th. During the past year 38,282 visits were paid to 2,432 patients, an average of 11.6 visits to each patient. The following officers were elected: Mrs. Henry C. Lea, president; Miss Lucy Davis, corresponding secretary; Mrs. Morris Jastrow, Jr., recording secretary; Mrs. Albert P. Brubaker, treasurer; board of managers, Mrs. Henry C. Lea, Miss Lucy Davis, Mrs. Morris Jastrow, Jr., Mrs. A. P. Brubaker, Mrs. William F. Jenks, Miss Susan Stevenson, Miss Mary S. Buckley, Mrs. Charles Francis Gummey, Miss Helen E. Williams, Miss Cornelia Frothingham, Mrs. William S. Grant, Jr., Mrs. C. Stuart Patterson, Miss Mary S. Febiger, Mrs. William H. Glasgow, Mrs. J. Dundas Lippincott.

Charitable Bequests.—By the will of Rev. Benjamin H. Sanderlin, the Methodist Episcopal Hospital receives \$5,000 for the endowment of the Memorial Methodist Episcopal Church Bed.

By the will of Mary Kelly St. Vincent's Home receives \$200.

In adjudicating the estate of J. Alfred Kay the Orphans' Court awarded \$1,520.87 to each of the following hospitals: Pennsylvania, Germantown, University of Pennsylvania, Jefferson, Philadelphia Orthopaedic, and Polyclinic.

By the will of George V. Wallace, of Easton, Pa., the Easton Hospital receives \$300.

Dr. Thomas E. Parke, of Downingtown, Pa., has given the Chester County Hospital, at West Chester, \$2,500, to endow a bed in memory of his son, William Bacon Parke.

Mr. James Moses, of Trenton, N. J., has endowed a free bed in the McKinley Hospital, Trenton, in memory of William B. Allen.

The Health of Philadelphia.—During the week ending March 3, 1906, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever	352	43
Scarlet fever	44	..
Diphtheria	55	7
Whooping cough	73	1
Measles	91	1
Mumps	632	16
Varicella	48	10
Typhus	114	60
Pharyngitis	222	95
Erysipelas	18	22
Paratyphoid	1	5
Mononucleosis	16	6
Septicæmia	3	1
Other	39	32

The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 9; diarrhoea and enteritis, under two years of age, 19. The total deaths were 670, in an estimated population of 1,469,126, corresponding to an annual death rate of 23.72 in 1,000 population. The total infant mortality was 166; under 1 year of age, 123; between 1 and 2 years of age, 43. There were 32 still births, 17 male and 15 females. The temperatures were moderate. There was a total rainfall of 1.47 inch.

BOSTON AND NEW ENGLAND.

The Health of Fall River, Mass.—The annual report of the board of health for the year 1905 shows 114 cases of typhoid fever, with 9 deaths. This a remarkable record for a city of 110,000 inhabitants, and is attributed largely to the purity of the water supplied to the city, and to the thorough regulation of milk farms. No milk can be sold in the city except from a licensed dairy, and each dairy furnishing milk to the city is inspected four times a year, whether within or outside the State.

The Winnepesaukee (N. H.) Academy of Medicine.—The ninety-sixth annual meeting of this academy was held at Laconia, N. H., on Monday, March 5th, under the presidency of Dr. J. G. Quimby. Dr. F. L. Hawkins, of Meredith, presented a case of Congenital Cervical Spina Bifida occurring in a well nourished child aged six months and a half. Dr. Easton presented cases of Arthritis, one with destruction of tissue, and one chronic case with increase of tissue. Dr. A. H. Harriman, of Laconia, read a paper on Eye Syphilis.

The New Haven (Conn.) Medical Association.—At a meeting held on Wednesday, February 21st, the committee on patent medicines introduced a resolution that the secretary of the association be requested to write to certain firms asking them to officially notify the association when they have withdrawn from the Proprietary Association of America. It was also resolved that the committee appoint a chemist to analyze such secret and patent remedies as the committee may consider advisable; provided such appointment and analyses can be made without expense to the association.

The Springfield (Mass.) Medical Library Association held its first regular meeting on Friday, March 9th. Papers were read by Dr. Dudley Carleton and Dr. J. L. Butler. The association is composed of the younger practitioners of Springfield, and has for its object the promoting of the social and scientific interests of its members. The officers are: President, Dr. Dudley Carleton; vice-president, Dr. E. M. Brown; secretary and treasurer, Dr. P. M. Cort; librarian, Dr. J. L. Butler; executive committee, Dr. C. F. Lynch, Dr. J. M. Tracy, and Dr. S. A. Lewis. A meeting of the association will be held each month.

The Bowditch Medical Club, of Boston.—Dr. Henry P. Bowditch, professor of physiology at Harvard medical school, was the guest of honor at the recent annual dinner of the Bowditch club, composed of Boston physicians, and named after Dr. Bowditch. At the close of the dinner Dr. Bowditch was presented a solid silver loving cup by the members of the club, the presentation speech being made by the president, Dr. Cleghorn. Dr. Reginald H. Fitz, professor of theory and practice of physics at Harvard medical school, was the principal speaker of the evening, and talked interestingly on Personal Experiences in the Study of Appendicitis.

The Franklin County (Mass.) Hospital at Greenfield.—The annual meeting of the medical board was held on Wednesday, March 7th. The following officers were elected: President, Dr. A. C. Walker; vice-president, Dr. E. G. Best; secretary, Dr. C. F. Canedy. This assignment of physicians in attendance and alternates was made for the coming year: April, Dr. E. G. Best, Dr. H. G. Stetson; May, Dr. H. G. Stetson, Dr. C. F. Canedy; June, Dr. C. F. Canedy, Dr. G. A. Cooke; July, Dr. G. A. Cooke, Dr. L. A. Newton; August, Dr. L. A. Newton, Dr. C. M. Greenough; September, Dr. C. M. Greenough, Dr. H. N. Howe; October, Dr. H. N. Howe, Dr. H. G. Stetson; November, Dr. H. G. Stetson, Dr. E. G. Best; December, Dr. E. G. Best, Dr. C. F. Canedy; January, Dr. C. F. Canedy, Dr. L. A. Newton; February, Dr. L. A. Newton, Dr. C. M. Greenough; March, Dr. C. M. Greenough, Dr. H. N. Howe; representative on the board of managers, Dr. H. N. Howe; in charge of training school, Miss Anna M. Sweeney; superintendent, Dr. H. N. Howe, Dr. C. M. Greenough, and Dr. C. F. Canedy.

BALTIMORE AND THE SOUTH

The Cabell County (W. Va.) Medical Society.—A meeting was held at Huntington, West Virginia, on the evening of Thursday, March 8th. A paper entitled Ulcer of the Bowels as a Cause of Intestinal Disorders in Children was read by Dr. Vinson.

The Chatham County (Ga.) Medical Society.—At a meeting held at Savannah on Wednesday, February 28th, the following programme was presented: Dr. W. B. Crawford read a paper on Hernia, and Dr. A. B. Simmons one on Points in Life Insurance Examinations.

The Richmond (Va.) Academy of Medicine and Surgery.—At a meeting of this academy held on Tuesday, March 13th, the subject for discussion was Examination for Life Insurance, with Dr. R. D. Garcin as leader, followed by Dr. M. D. Hoge.

The Memphis and Shelby County (Tenn.) Medical Society held its annual meeting at Memphis, on Tuesday, March 6th. The election of officers resulted as follows: President, Dr. James L. Barton; vice-president, Dr. Cummings Harris; secretary, Dr. J. W. Price.

The Johns Hopkins Hospital Medical Society.—The regular monthly meeting was held at the hospital on Monday, March 5th. Dr. Royal Whitman, of New York, presented a paper on The Treatment of Fracture of the Neck of the Femur, and Dr. J. C. Bloodgood presented a paper entitled Some Observations on Coxa Vara.

The Virginia State License Tax on Physicians.—By the provisions of a bill passed by the House of Representatives on March 8th, the physicians of Virginia are exempted from the tax of \$10 per annum heretofore imposed. A similar tax, levied by the city of Richmond, was repealed by an ordinance adopted by the board of aldermen on February 13, 1906.

The Obion County (Tenn.) Medical Society held a meeting at Union City on Tuesday, February 27th. The subject for discussion was Diseases of the Throat. Dr. D. M. Pearce, Dr. J. B. Hibbits, Dr. J. F. Roper, Dr. J. M. Rippey, Dr. W. P. Richards, Dr. S. T. Butler, and Dr. M. A. Blanton took part in the discussion. At the next meeting the subject for discussion will be Asthma, Emphysema, and Tuberculosis.

A Bonus Offered for the Capture of Specimens of Stegomyia.—The city board of health of New Orleans has given out the following announcement: Five cents will be paid for each stegomyia mosquito, male or female, dead or alive, found in any house in New Orleans and delivered to the office of the board of health during the month of March. A reward of \$5 will be paid for the first live female stegomyia mosquito found in any house in New Orleans and delivered to the office of the board of health, together with the address where found, and the hour and date when delivered. A reward of \$3 will be paid for the second, and \$2 for the third live female stegomyia mosquito found and delivered under like conditions.

Medical Organization in Georgia.—A meeting of all the physicians of De Kalb, Rockdale, Newton, and Walton, Georgia, Counties, will be held in Covington, Ga., on March 20th. Dr. E. C. Davis, counselor of the fifth district, will make an address on Medical Organization. Dr. W. Z. Holliday, of Augusta, president of the Medical Association of Georgia, will also deliver an address. Papers will be read by the following: (1) Brain Functions, by Dr. E. Bates Block, Atlanta; (2) Is There an Epidemic of Scabies in the State? by Dr. Bernard Wolff, Atlanta; (3) When to Operate Successfully, with Report of a Case of Hip Joint Amputation, by Dr. Thomas H. Hancock, Atlanta; (4) Loss of Confidence in X Ray Treatment, by Dr. M. B. Hutchins, Atlanta; (5) Bronchopneumonia, by Dr. S. A. Visanska, Atlanta; (6) Perineorrhaphy, by Dr. George H. Noble, Atlanta; (7) Acetozones, by Dr. R. L. Hollis, Haystone; (8) Subject to be announced, Dr. J. M. Crawford, Atlanta; (9) Some Remarks on Diphtheria, by Dr. Claude A. Smith, Atlanta.

The Medical Society of the Missouri Valley will hold its semi annual meeting at St. Joseph, Mo., on Thursday and Friday, March 22nd and 23rd. The preliminary programme is announced as follows: Dr. N. S. Davis, Jr., Chicago, Oration in Medicine; Dr. L. L. McArthur, Chicago, Oration in Surgery—Surgery of Intestinal Tuberculosis; Dr. C. H. Mayo (President of Minnesota State Medical Association), Rochester, Minn., Surgical Treatment of Goitre; Dr. William Jepson (President Iowa State Medical Association), Sioux City, Ia., Prostatism and Its Management; Dr. D. C. Gore (President Missouri State Medical Association), Marshall, Mo., State Medicine; Dr. Fenton B. Turck, Chicago, Medical and Surgical Treatment of Gastric Diseases; Dr. A. F. Jonas (President Nebraska State Medical Association).

ciation), Omaha, Neb., subject not announced; Dr. S. Grover Burnett, Kansas City, Some Pathology of the Morphine Habit, and My Preferred Method of Treatment; Dr. Prince E. Sawyer, Sioux City, Ia., Curettage of the Uterus; Its Dangers; Dr. Bernard A. McDermott, Omaha, Some Principles in the Treatment of Rupture of the Male Urethra; Dr. C. O. Thienhaus, Milwaukee, Wis., Review of My Operations for Total Prolapse of the Uterus; Dr. William F. Waugh, Chicago, Cardians; Dr. Palmer Findley, Chicago, Limitations in the Indications for Vaginal Cæsarean Section; Dr. Charles E. Bowers (President Kansas State Medical Association), Topeka, Kas., Treatment of Patients Desperately Ill in Consequence of Accident; Dr. A. E. King, Blackton, Ia., Rhachitis; Dr. William Frick, Kansas City, Blastomycetic Dermatitis, with reports of cases; Dr. F. E. Coulter, Omaha, Tumors of the Cerebellum, with report of a case; Dr. D. W. Basham, Wichita, Kan., Simultaneous Existence of Extra and Intrauterine Pregnancy; Dr. J. C. Waterman, Council Bluffs, Functional Disorders of the Stomach, Accompanied by Hypersecretion; Dr. M. M. Edmonson, Kansas City, Club Foot, with Special Reference to Postoperative Treatment; Dr. Marc Ray Hughes, St. Louis, Some Notes on Pathology of Epilepsy; Dr. W. F. Milroy, Omaha, Indirect Effects of Valvular Lesions; Dr. Frank Parsons Norbury, Jacksonville, Ill., Individual Treatment of Borderline Cases of Mental Disease; Dr. T. C. Witherspoon, St. Louis, Removal of the Uterus in Certain Inflammatory Conditions; Dr. R. D. Mason, Omaha, Some Advances in the Office Treatment of Rectal Diseases; Dr. R. C. Moore, Omaha, The County Sanatorium for Pulmonary Tuberculosis; Dr. L. J. Dandurant, St. Joseph, Ligation of Common Femoral Artery for Large Aneurysm in Scarpa's Triangle; Recovery; Presentation of Patient; Dr. E. T. Shelly, Atchison, Kan., The Expectant Mother; Dr. John P. Lord, Omaha, The Surgery of the Paralyzes; Dr. A. H. Cordier, Kansas City, Exhibition of an Interesting Specimen; Dr. Herman E. Pearse, Kansas City, Catheterization of the Ureter in the Female. The officers of the association are as follows: President, Dr. J. E. Summers, Jr., Omaha; first vice-president, Dr. C. H. DeWitt, Glenwood, Ia.; second vice-president, Dr. C. B. Hardin, Kansas City; treasurer, Dr. Donald Macrae, Council Bluffs; secretary, Dr. Charles Wood Fassett, St. Joseph; arrangement committee, Dr. Jacob Geiger, Dr. O. B. Campbell, Dr. C. R. Woodson, St. Joseph.

CHICAGO AND THE WEST.

The Colorado Medical Journal.—The following changes in the editorial staff of this journal are announced: Dr. William M. Beggs, for several years editor-in-chief, has retired, and Dr. T. Mitchell Burns, president of the Denver County Medical Society, has been appointed to fill the vacancy. Dr. Burns will be assisted by Dr. J. N. Hall.

Statement of Mortality in Chicago for the Week Ending March 3, 1906, compared with the preceding week and with the corresponding week of 1905. Death rates computed on United States Census Bureau's midyear population—2,049,185 for 1906, 1,990,000 for 1905:

	Mar. 3, 1906.	Feb. 24, 1906.	Mar. 4, 1905.
Total deaths, all causes.....	563	594	627
Annual death rate in 1,000.....	14.32	15.10	15.94
Sexes.....			
Males.....	318	326	369
Females.....	245	268	258
Ages.....			
Under 1 year of age.....	109	136	129
Between 1 and 5 years of age.....	49	41	60
Between 5 and 20 years of age.....	51	41	44
Between 20 and 60 years of age.....	234	252	249
Over 60 years of age.....	120	124	145
Important causes of death.....			
Apoplexy.....	15	13	16
Bright's disease.....	43	49	33
Bronchitis.....	15	19	25
Consumption.....	63	52	73
Cancer.....	21	31	25
Convulsions.....	9	12	16
Diphtheria.....	10	9	17
Heart diseases.....	32	44	43
Influenza.....	3	3	11
Intestinal diseases, acute.....	27	30	24
Measles.....	2	4	1
Nervous diseases.....	17	31	28
Pneumonia.....	111	108	117
Scarlet fever.....	11	5	3
Smallpox.....	0	0	3
Suicide.....	9	5	10
Typhoid fever.....	8	1	3
Violence (other than suicide).....	27	39	26
Whooping cough.....	3	1	7
All other causes.....	137	138	144

Pith of Current Literature.

AMERICAN MEDICINE.

March 10, 1906.

1. Experimental Method in Sanitary Science and Sanitary Administration, By WILLIAM T. SEDGWICK.
2. A Review of Recent Observations on Treponema Pallidum of Syphilis, By CHARLES A. PFENDER.
3. Litholapaxy versus Lithotomy, By GEORGE KNOWLES SWINBURNE.
4. The Outlook for the Chronic Dyspeptic, By CLAYTON KNAPP.
5. Appendicitis: When to Operate, By S. EDWARD SANDERSON.
6. Life Insurance Companies and the Prevention of Tuberculosis.

2. A Review of Recent Observations on Treponema Pallidum of Syphilis.—Pfeuder gives a review on the recent observation of the bacillus which may be the ætiological factor in the production of syphilis. Siegel discovered the cytorrhcytes luis, while Schaudinn following the methods of Siegel found the spirochæta pallida, now classified, says the authors, as the treponema pallidum, a bacillus which is present in every case of uncomplicated syphilitic disease. Schaudinn and Hoffmann found another organism in their researches, which they called spirochæta refringens. Following this short introduction the author, after describing the treponema pallidum, gives an exhaustive review of the opinions of bacteriologists and a detailed description of the modes of staining.

3. Litholapaxy versus Lithotomy.—Swinburne is in favor of litholapaxy as compared with lithotomy. There is no comparison in the after effects between the two operations; in the one, the patient is able to go about his business in forty-eight hours, while in the other it takes practically six weeks for the wound to heal and another six weeks before he has gained strength enough to pursue his vocation. The reason that the American surgeons seem to prefer lithotomy is their not being acquainted with the crushing method, which is an entirely safe procedure in skillful hands. The author usually operates under general anæsthesia, using a medium sized Keyes lithotrite and a Chismore evacuator. The operation generally lasts one half to three quarters of an hour, though the actual crushing may often last only ten minutes.

4. The Outlook for the Chronic Dyspeptic.—Knapp states that the outlook for the chronic dyspeptic is of the very brightest, but that if not correctly understood and not properly treated diseases of other organs are bound to follow as the direct result of improper digestion.

THE BOSTON MEDICAL AND SURGICAL JOURNAL

March 8, 1906.

1. The Value of Laboratory Methods to the Country Practitioner, By J. R. COWAN.
2. The Value of Virchow's Smooth Atrophy of the Base of the Tongue in the Diagnosis of Syphilis, By NATHANIEL BOWDITCH POTTER.
3. A Demonstration of the Spirochæta Pallida of Syphilis, with the Rapid Method of Staining, By F. J. MANAHAN.
4. A Case of Congenital Occlusion of the Small Intestine; Operation; Autopsy, By LINCOLN DAVIS.
5. I. Resection of Colon for Obstruction by a Malignant Adenoma. II. Epithelioma of the Oesophagus; Excision. III. Shoulder Girdle Amputation for Carcinoma of the Axilla. IV. Traumatic Cyst of the Pancreas, By F. B. HARRINGTON.
6. A Case of Hypernephroma, By F. C. SHATTUCK.
7. A Case of Amputation at the Shoulder Joint for Infection with Welch's Gas Producing Bacillus; Recovery, By E. A. CODMAN.
8. A Metastatic Hypernephroma, By CHARLES L. SCUDDER.

1. **The Value of Laboratory Methods to the Country Practitioner.**—Cowan is of the opinion that the country physician should make himself thoroughly acquainted with laboratory work. If he is engaged in the application of laboratory methods he is very apt to keep himself posted and keep in touch with his profession. It will improve his knowledge and ability, and will, therefore, be appreciated by his patients. The patients of the country physician are as much isolated as he, and must depend wholly upon him; he is, therefore, in duty bound to give them a compensation for his absolute dependence.

2. **The Value of Virchow's Smooth Atrophy of the Base of the Tongue in the Diagnosis of Syphilis.**—Potter states that a normal base of the tongue is probably of considerable value in excluding an old syphilitic infection, while a moderate or slightly marked atrophy of the base is of little value. A typical atrophy of the base in an individual below fifty years points to syphilis.

3. **A Demonstration of the Spirochæta Pallida of Syphilis, with Description of Rapid Method of Staining.**—Manahan draws from his observations the following conclusions: The constant occurrence of the spirochæta pallida in typical syphilitic lesions indicates: (1) That it is the organism which causes syphilis. (2) An early diagnosis can be made without waiting for the appearance of secondary symptoms; this is a great advantage, because the treatment can be commenced before a general systemic infection has taken place. The material from ulcers of the penis are best stained with Dr. Wright's blood stain, which will take only five minutes. Wright describes his method in his *Pathological Technique*, page 371. (3) The presence of large numbers of spirochæta pallidæ (in one case fifteen in one field) in mucous patches bears out well the known clinical fact as to the infectiousness of mucous patches.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 10, 1906.

1. Immediate Examination of Uterine Mucosa and Myomatous Nodules After Hysteromyomectomy to Exclude Malignant Diseases. By THOMAS S. CULLEN.
 2. Note on the Morphology of Blood Plates, By MARY W. BOWLEY.
 3. The Early Diagnosis and Medical Care of Carcinoma of the Prostate. A Study of Fifty Cases and Presentation of a Radical Operation. By H. YOUNG.
 4. The Treatment of Aneurysm by Direct Gradual Arterial Closure. Report on the Application of the Method to a Case of Aneurysm of the Abdominal Aorta. By ROBERT J. STRATTON.
 5. Cases of Fæcal Impaction of the Rectum. By THOMAS CHARLES MARTIN.
 6. The Broad Tapeworm in Minnesota, with a Report of a Case of Infection Acquired in the State. By W. S. NICKERSON.
 7. Insanity as a Result of Hysterotomy and Oöphorectomy. By M. HAMMOND.
 8. The Nauheim Baths and Treatment of Heart Diseases. By G. WACHENFELD.
 9. The Medical Profession and the Medical Journals in Relation to Nostrums. By FRANK BILLINGS.
3. **The Early Diagnosis and Radical Cure of Carcinoma of the Prostate. A Study of Fifty Cases and Presentation of a Radical Operation.**—Young adds to his report in the October number of *Johns Hopkins Hospital Bulletin* of forty cases of carcinoma of the prostate ten more. After speaking of the diagnosis and clinical findings, he describes his radical operation which he performed on six patients with one operative death. Cancer of the prostate is quite a common disease, about one case in seven of prostatic enlargements in men past fifty being cancerous. It is characterized by induration, often of stony hardness, and pain is frequently present. The early diagnosis may be made when there is marked induration, and the absence of

the usual intravesically projecting lobes, as shown by the cystoscope. The disease is often of slow growth, and remains for a long time confined within the limits of the firm prostatic capsule. The operation is not difficult of performance, and furnishes remarkably satisfactory functional results. With early diagnosis the mortality should be nil and the percentage of cures large. The general practitioner should suspect every indurated enlarged prostate and the patient should be urged to submit to a perineal operation, when, if the disease is proved to be malignant, the operation can be done.

4. **The Treatment of Aneurysm by Direct Gradual Arterial Closure.**—Stratton suggests gradual arterial closure as a probable means of relief for certain cases of aneurysm. The main basis for his procedure lies in facts observed in human pathology and surgical experience. The author reports in detail a case of an aortic aneurysm treated by a constrictor applied above the sac and gradually tightened. The patient did well for nearly two days, but then rapidly failed, with sensory and motor paralysis of the lower limbs, and died on the same day. Death was attributed to inhibition of the functions of the abdominal viscera by the final withdrawal of the blood supply. Stratton thinks that notwithstanding the fact that this patient died, the case as a whole warrants a hopeful future as to the outlook for his method.

5. **Cases of Fæcal Impaction of the Rectum.**—Martin calls the attention to the advantages offered by the proctoscope as a means for the relief of fæcal impaction in the rectum. The treatment consists in the elevation of the patient's hips, introduction of the anascope or proctoscope, and subsequently the withdrawal of the obturator and illumination of the rectum, for which purpose he has devised a special candlestick, which he describes. Through the proctoscope, by means of forceps and spoon, the impacted masses are easily removed without manual contact and without anæsthesia. Recurrence is to be prevented largely by the removal of the mechanical cause by division of the obstructing valve, by hysterectomy, etc. Besides the patient's diet should be limited to meat, fruits, and those vegetables which contain but little starch. Alcohol should be given daily, the patient should be required to drink quantities of water and to employ the enema frequently, but cathartics are to be condemned. Proper bathing, massage, and open air exercises should be insisted on.

6. **The Broad Tapeworm in Minnesota.**—Nickerson describes three cases of broad tapeworm found in Minnesota. Two of the patients were Finlanders, while the third was a child, born of Finnish parents in Minnesota. Osler, in his textbook, says that the broad tapeworm of man (*dibothriocephalus latus*), as far as he knows, has not been found in the United States except in a few imported cases. The case of the child is of exceeding interest, since there can be no question that the infection occurred in Minnesota, and it therefore demonstrates the fact that the broad tapeworm has now a foothold, at least locally, in this country. Larvæ of *dibothriocephalus* occur in American fishes, caught in the Great Lakes, but without feeding experiments to rear the adult worm from the larva, it is impossible to determine its species, and the probability is in favor of such larvæ being of some species other than *latus*, the parasite of man. The author thinks it more probable that the infection in the cases reported is due to sewage from a region largely inhabited by Finns and others among whom the parasite is common. But now that it is shown that infection of American fish by the larvæ is possible and has occurred locally, it is important that all possible measures should be taken to prevent the infection from becoming widespread.

8. The Nauheim Baths and Treatment of Heart Diseases.—Wachenfeld, of Bad-Nauheim, wishes to correct statements made by Dr. Anders, of Philadelphia, referring to practice at Nauheim in treating heart disease with gymnastic exercises. This is not the case. Out of fifty physicians practising in Nauheim, the gymnastic treatment is solely applied by Professor Schott, and only a few physicians use the exercise with the so called Zander's apparatus, but not until the muscles of the heart have been sufficiently strengthened by the bath treatment. The good results are entirely due to the baths and the number of physicians who reject the gymnastic treatment is considerable. They rely mainly on the baths, prescribe all the rest possible and try with the aid of additional means, such as massage, diet, etc., to unburden the heart.

MEDICAL RECORD

March 10, 1906.

1. Intracranial Lesions as Sequelæ of Chronic Purulent Otitis Media. By M. ALLEN STARR.
2. Mastoiditis in Infants. By SEYMOUR OPPENHEIMER.
3. Literary Gems from the Medical Essays of Oliver Wendell Holmes, By LOUIS E. BLAIR.
4. The Serum Treatment of Hay Fever, By CHARLES H. KNIGHT.
5. Human Blood Pressure and Pulse as Affected by Altitude, By CHARLES FOX GARDINER and HENRY W. HOAGLAND.
6. Inebriety Often a Form of Moral Insanity. By T. D. CROTHERS.
7. Vaginal Section in Relation to Puerperal Sepsis, By J. S. PRICE.
8. Korsakoff's Disease: A Report of Four Cases, By EDWARD LIVINGSTON HUNT.
9. Open Safety Pin Swallowed by an Infant Six Weeks Old, and Successfully Passed by Bowel Six Days Later, By B. VAN D. HEDGES.

1. Intracranial Lesions as Sequelæ of Chronic Purulent Otitis Media.—Starr speaks in this paper of (1) the possible cerebral complications of otitis media; (2) the symptoms which are an aid in their diagnosis; (3) the proper methods of surgical treatment; and (4) the results of surgical operations for these complications: (1) The ordinary cerebral complications are abscess of the brain, meningitis, and sinus thrombosis. (2) The complications of otitis media seem most easy to be detected from the typical variability of the temperature curves, the congestion of the jugular vein and the enormous leucocytosis usually present. Indeed, the examination of the blood may afford important data in determining if cerebral complication is present, and if so to its exact nature. (3) It is imperative to open the skull as soon as the diagnosis is made, and have the opening large enough for evacuation and drainage of the abscess. (4) The author found in the literature, from 1900 to 1906, that out of eighty-one abscesses of the brain, secondary to otitis, on which an operation was performed, 42 patients recovered.

2. Mastoiditis in Infants.—Oppenheimer says that the general symptoms of mastoiditis vary in almost every case, and are of value only in occasionally directing suspicion to the affected ear. Often the sole evidences of the ear affections must be gained from a careful study of the child for several days. The complications are many. The author concludes: "I would call attention to the absolute necessity of a careful examination under proper illumination of the membrana tympani of all ill infants independent of whatever be the nature of the affection present."

4. The Serum Treatment of Hay Fever.—Knight thinks that a final decision as to the value of serum treatment in hay fever does not as yet seem warranted. From the mass of experience and literature being accumulated we may hope soon to arrive at a conclusion.

5. Human Blood Pressure and Pulse as Affected by Altitude.—Gardiner and Hoagland have made a series

of investigations on blood pressure in Colorado. The work was divided in five groups: Group No. 1.—Average pulse and blood pressure in men and women of all ages, resident at 6,000 feet altitude for over one year. Group No. 2.—Average pulse and blood pressure in men who had lived at 6,000 feet altitude for over twenty-five years. Group No. 3.—Effect of muscular exertion upon college men. Group No. 4.—Effect upon blood pressure and pulse upon twenty-two men and women taken from 6,000 to 14,000 feet. Group No. 5.—Effect upon pulse and blood pressure in twenty-two college men taken from 6,000 to 14,000 feet, and the effect of three and a half hours at over 14,000 feet. From this work upon the pulse and blood pressure the authors feel justified in offering the following suggestions: Although they found the average pressure of the blood was not lowered more than from 8 to 10 mm. of Hg. in a diminished atmospheric pressure of 8,000 feet altitude, and that this change in pressure in the blood is a small one in healthy young adults, it can easily be seen that such a change from the normal, continued for a considerable time, especially in many diseased conditions, would be a positive and possibly a serious interference with the mechanism of the human circulation, an interference that under given conditions might be a strong influence either for good or ill.

6. Inebriety Often a Form of Moral Insanity.—Crothers wishes to emphasize the fact that moral insanity follows the use of alcohol, and is present in all inebriates to a greater or less degree. This condition is inherited and acquired, and exists to a far greater extent than would be supposed. There are many excellent men who use spirits, not to a great excess, who are sufferers from the disease. The constant beer and spirit drinker will be found to present the most numerous examples.

8. Korsakoff's Disease; a Report of Four Cases.—Hunt writes that it is well established that Korsakoff's disease is a polyneurotic psychosis which may, however, manifest itself without neurotic symptoms. Its character is that of an amnesia. The ætiology in the large majority of cases is alcoholic, although other conditions may have to be taken into consideration, such as typhoid fever, pyæmia, jaundice, and tuberculosis. The mental phenomena, according to Jolly, are disturbances of memory and pseudo reminiscences. The author represents four cases which he summarizes as follows: The first was alcoholic plus drugs, the second and third were both uncomplicated alcoholic, the fourth was posttyphoid, and may have been complicated with alcohol. Only one—the first—showed distinct neuritic symptoms, although both the second and fourth were weak on their legs, and probably in both the knee jerk was diminished. All except the typhoid case showed a tremor. All four displayed characteristic and identical mental symptoms—loss of memory for recent events, disorientation as regards time and place, confusion followed by violence and motor restlessness. Two out of the four patients recovered; none died; two returned to their excesses, and their cases may practically be considered as chronic.

BRITISH MEDICAL JOURNAL.

February 24, 1906.

1. The Complications of Scarlet Fever, By W. HUNTER.
2. Whitlow and Its Treatment, By G. B. M. WHITE.
3. Plumbism from the Injection of Diachylon as an Abortifacient, By A. HALL and W. B. RANSOM.
4. On the Indications and Contraindications for the Removal of the Gallbladder; with a Description of the Technics and an Analysis of Fifty-seven Cases, By A. W. M. ROBSON.
5. Case of Intrahepatic Calculi, By H. R. VACHELL and W. M. STEVENS.
6. Observations on Pancreatic Necrosis, with a Report of Two Cases, By G. BARLING and C. L. EVANS.

7. Note on a Paracolon Bacillus Found in the Urine, By W. MAIR.

1. Scarlet Fever.—Hunter briefly defines scarlet fever and its features as follows: It is a fever characterized by sore throat, more or less adenitis, a specific rash, a specific desquamation, and a specific course lasting usually for six weeks. The mode of onset is usually with sore throat, headache, and vomiting, those occurring in about eighty-five per cent. of the cases. Sore throat is the commonest of these symptoms, headache the next. In addition to these specific symptoms some cases present rigors and diarrhoea, a few have pain in the limbs, and a few present epistaxis. The rash appears in half the cases on the second day, and lasts about six days. Desquamation usually begins during the first week at the root of the neck. On the toes and feet it may appear very late. The complications are as follows: Adenitis, 19 per cent.; albuminuria, 21 per cent., and actual nephritis, 2.8 per cent.; atorrhoea and otitis, 6.4 per cent.; rhinitis and rhinorrhoea, 6.4 per cent.; rheumatism, 4.3 per cent.; and secondary tonsillitis, 3.5 per cent. Mastoiditis, meningitis, optic neuritis, and ocular palsies also occur. The degree of the rash has some little influence on the height of the initial fever, and slightly more on the duration of the pyrexia, but it is not related to the subsequent severity of the case. A case with a severe rash may pursue a mild course, and vice versa. On the whole, however, a severe rash is more likely to be followed by complications than a mild one. There is some relation between the severity of the initial angina and the tendency to the occurrence of secondary adenitis, but this is not so close or so general as to account for the occurrence of the secondary adenitis. There is no actual definite relation between the height of the temperature and the occurrence of complications. The author has studied the relation of oral sepsis and scarlet fever, and he concludes that the severity of the disease, that is, of the septic complications of it, is greatly influenced by the degree of oral sepsis in the patient before admission. This is not surprising, considering that the actual lesion in scarlet fever is in the throat, and the simple addition to this of a staphylococcal infection may be a very serious matter. Of cases without oral sepsis, only thirty-five per cent. had complications of moderate or severe degree; whereas of cases with oral sepsis, sixty-five per cent. showed such complications. The physician's first duty, therefore, is to eliminate this factor if it be present, just as he would remove any other possible source of trouble. It is no less important in typhoid fever, in which disease the septic factor is an important cause of the chief intestinal complications, perforation, and hæmorrhage.

4. Removal of the Gallbladder.—Robson protests against the indiscriminate removal of the gallbladder in all cases in which an operation on the bile passages is called for. In ordinary cases of cholelithiasis, cholecystotomy with drainage of the gallbladder is a very safe and efficient operation, and if the ducts are cleared there need be no fear of fistula or of recurrence of gallstones. Cholecystectomy is indicated in the following conditions: 1. In cancer or other new growth where the disease is local and limited. 2. In contracted and useless gallbladder, the result of repeated attacks of cholecystitis. 3. In dilated or hypertrophied gallbladder resulting from obstruction in the cystic duct. 4. In phlegmonous or gangrenous cholecystitis. 5. In empyema, calcareous degeneration, or mucous fistula of the gallbladder. 6. In gunshot or other serious injuries of the gallbladder or cystic duct. It is unnecessary in ordinary cholelithiasis. The author holds that there is an undoubted relationship between cholelithiasis and cancer of the gallbladder and ducts; and as gallstones produce characteristic symptoms, and are therefore as a rule easily diagnosed, and as they can be

removed in the early stages before serious complications have supervened with very little risk, the preventive treatment for cancer of the gallbladder is obviously removal of the source of irritation.

LANCET.

February 24, 1906.

1. Gastric Surgery. (Hunterian Lectures I and II),
By H. J. PATERSON.
2. The Physical Anthropology and Ethnology of British
New Guinea. (Hunterian Lectures III),
By C. G. SELIGMANN.
3. Oral Sepsis,
By S. SPOKES.
4. Plumbism from the Ingestion of Diachylon as an
Abortifacient, By A. HALL and W. B. RANSOM.
5. Recurrent Herpes Gestationis, By C. A. D. BRYAN.
6. Acute Hæmorrhage Into a Gallbladder, the Seat of
Infective Cholecystitis, and Hundreds of Gallstones,
By J. A. W. PEREIRA and J. D. HARRIS.
7. A Case of Double Vaginal Cysts,
By H. MACNAUGHTON-JONES.
8. An Attempt to Simplify the Diagnosis of Ocular Pa-
ralysis, By W. H. HAW.
9. Volunteer Quartering and Equipment,
By F. CHURCHILL.

1. Gastric Surgery.—Paterson, in the first two of his Hunterian lectures, considers some of the results of gastric surgery. He draws the following conclusions as to the after results of the operation of gastrojejunostomy: 1. That the use of mechanical appliances is attended with uncertain results. 2. That a small opening is apt to be unsatisfactory. 3. That if the mucous membranes of the stomach and jejunum are not brought into apposition undue contraction or even complete closure of the opening may ensue. 4. That about eighty-five per cent. of the patients suffering from simple pyloric stenosis or gastric ulcer are completely relieved, while in about seven per cent. of the cases relief is almost complete. Eliminating the cases in which a mechanical appliance has been used or in which a small opening has been made, the proportion of cases completely relieved is about ninety-two per cent. 5. That the risk of subsequent perforation of a peptic jejunal ulcer is under two per cent. 6. That as patients have regained and maintained their normal weight and have lived for nearly twenty years in perfect health, there can be no reason to suppose that the operation of gastrojejunostomy tends to shorten life. As regards the effect of the operation on the metabolism of the human body, the writer concludes that the additional opening between the stomach and jejunum does not interfere with metabolism to any extent. After the operation most of the food passes through the larger and less resistant artificial opening. When all the food does pass through the short circuit, this cutting off of the duodenal loop is attended by no ill effects. The methods of performing gastrojejunostomy have practically been reduced to two, the anterior and posterior methods, respectively. Although most authorities prefer the posterior operation, yet the author holds the anterior to be the better of the two, there being less risk of subsequent complications. In hæmorrhage from an acute ulcer, erosion, or exulceratio simplex (sudden bleeding without history of ulcer), first give a thorough trial to absolute rest in bed, Trippier's hot water injections by the rectum, and avoidance of food by the mouth for at least four or five days. If a second profuse hæmorrhage occurs perform gastrojejunostomy. It is advisable to delay operation until the collapse from the hæmorrhage has passed off. In hæmorrhage from a chronic ulcer, perform gastrojejunostomy after one severe attack or after several slighter attacks of hæmatemesis if the loss of blood is causing severe anæmia. For hourglass contraction, gastroplasty is the simplest operation, but relapse occurs with great frequency. It is advisable when either

gastroplasty or gastrogastrostomy is done to perform gastrojejunostomy at the same time.

3. Oral Sepsis.—Spokes urges more careful consideration of the cavity of the mouth as a possible source of infection to the rest of the body. It has long been known that patients who have their mouths cleared of septic teeth and stumps rapidly improve in health. Surgeons who undertake abdominal operations prefer, if time permits, to have the mouth put in good order first. In a healthy mouth septic organisms may die, whereas in the diseased mouth propagation is provided for and a larger dose prepared for entrance to the body by the lungs, the stomach, or the lymphatics. Such a septic condition of the mouth may be due to: 1. Neglect to clean the teeth. 2. Cavities in teeth caused by dental caries. 3. Alveolar abscess. 4. The difficult eruption of a lower wisdom tooth. 5. Deposition of tartar from the saliva, separation of the gum, and the establishment of the condition known as pyorrhœa alveolaris. Treatment consists in removal of stumps, and of decayed teeth that cannot be saved; filling of cavities; treatment of pockets with hydrogen peroxide, and removal of the redundant gum with the electric cautery; the use of alkaline antiseptic mouth washes; and last, but not least, the thorough and proper use of the tooth brush.

4. Plumbism Due to Diachylon.—Hall and Ransom state that during the last few years outbreaks of lead poisoning of varying extent and severity have occurred in different parts of England, which could not be traced to the ordinary sources of plumbism, such as water contamination or dangerous occupations. The cases were always limited to women of child-bearing age, and eventually the source of the poisoning was traced to the custom of taking diachylon as an abortifacient. From answers to letters sent out to about two hundred physicians, the following information was obtained: Diachylon usually does produce abortion; all are agreed as to its damaging effects to health and serious risk to life. The symptoms fall into three groups: 1. Those of acute lead poisoning, such as colic, vomiting, or encephalopathy. 2. Those attending abortion, such as metrorrhagia and metritis. 3. Those of chronic lead poisoning, such as anæmia, headache, and occasionally wrist drop. Insanity and blindness from optic atrophy have been enduring after effects. The diachylon is usually bought in the lump and made into pills. Among the various practical suggestions made as to the best method of dealing with the matter are the following: 1. To compel the publication of its ingredients on the cover of every patent remedy. 2. To prosecute and punish the makers and vendors of diachylon pills. 3. To seek the support of the lay press and invite them to abstain from publishing advertisements of "Female Irregularity" remedies. 4. To circularize or otherwise inform all medical practitioners in the country of the possibility of such a cause in obscure cases of plumbism, so that they may recognize it and warn their patients. 5. Compulsory notification of all cases of abortion. 6. To make lead poisoning in women a notifiable disease. 7. To control or prohibit the sale of diachylon.

5. Herpes Gestationis.—Bryan reports a case of this rare disease occurring in a woman, aged thirty-six years, five months pregnant. She complained of a rash on her arms which, on examination, proved to consist of erythema, papules, and vesicles of about the size of small peas; it was irritating and painful, and was for the most part limited to the forearms. The rash gradually extended over the rest of the body, leaving only the palms and soles free. The forearms became hot and swollen, and the vesicles were continually bursting, and fresh crops appearing. The symptoms caused considerable insomnia. Arsenic was given internally and various external remedies tried, but they gave no result. After six weeks, the foetal movements

ceased, and ten days later the patient was delivered of a still born child. About a year later the patient again became pregnant, and after two months the eruption again appeared. Once more all forms of treatment failed, and finally premature labor was induced. The author considers the condition to be due to the generation of some peculiar toxine, which acts upon the nervous system, thus giving rise to the disease. The toxine is probably developed by some morbid change taking place in the ovaries during pregnancy. The only rational treatment is the induction of premature labor as soon as the patient's health begins to be affected by the insomnia.

PRESSE MEDICALE.

February 14, 1906.

1. Albumin in the Alimentation of Tuberculous Patients, By H. LABBÉ and G. VITRY.
2. Lead Poisoning and the Treatment of Lead Colic, By DELEARDE and E. DUBOIS.
3. Recent Tuberculosis Lesions in the Kidney of a Woman, By C. JARVIS.
4. The Method of Bier and Massage in Sprains and Contusions, By RENE DE GAULEJAC.
5. Curettage of the Mesenteric Glands and Palpation of the Bronchial Glands, By R. ROMME.

1. Albumin in the Alimentation of Tuberculous Patients.—Labbé and Vitry state that in general the power to assimilate albumenoid material is subnormal in tuberculous subjects, that it is very variable and that it is of importance to be able to recognize in the diet of these patients the utilizable, and therefore beneficial, quantity of such food in each particular case.

2. Lead Poisoning and the Treatment of Lead Colic.—Deléarde and Dubois advocate epidural injections of cocaine in attacks of lead colic, and claim the following advantages are to be obtained from this form of treatment, rapid subsidence of the pain, almost immediate cessation of the vomiting and constipation, and a certain cure in one or two days. The dose to be injected varies in proportion to the intensity of the pain, from one to three centigrammes of cocaine dissolved in from two to four cubic centimetres of sterile water. The average dose is two centigrammes.

3. Recent Tuberculous Lesions in the Kidney of a Woman.—Jarvis reproduces the plates which illustrated an article on this subject by Mr. Harry Fenwick in the *British Medical Journal* of January 26, 1906.

4. Method of Bier and Massage in Sprains and Contusions.—De Gaulejac favors the application of a rubber band above the seat of injury, as suggested by Bier, and the employment of massage in cases of sprains and bruises of moderate severity in order to obtain a rapid cure.

5. Curettage of the Mesenteric Glands and Palpation of the Bronchial Glands.—Romme reports a case of mesenteric and subhepatic adenopathy of indeterminate nature which was discovered in the course of an exploratory laparotomy, and using it as a text, he discusses the recent papers of Corner on Curettage of the Mesenteric Glands, *Lancet*, December 23, 1905, and of Neisser on Palpation of the Bronchial Glands, *Deutsches Archiv für klinische Medizin*, 1906, page 28, but adds little if anything that is new.

SEMAINE MEDICALE.

February 21, 1906.

Subphrenic Abscess,

By PAUL CARNOT.

Subphrenic Abscess.—Carnot reports two cases, one from an anatomical, the other from a clinical point of view, of subphrenic abscess. A subphrenic abscess may be of hepatic, biliary, gastric, or duodenal origin, or it may be caused by appendicitis. It may be due to extension of an intrahepatic abscess, to the rupture of a hydatid cyst of the liver, to a purulent cholecystitis, to a cancer, to an ulcer of the stomach, or of the duodenum. When it is of gastric or duodenal origin the

pus is apt to be mingled with gas and to form a sub-phrenic pyopneumothorax. The symptomatology varies with the pathogeny of the abscess. If it is of hepatic origin, it will be preceded by symptoms of lithiasis, colic, icterus, or of the growth of a hydatid cyst, if of gastric origin by those of cancer, or ulcer of that organ, if due to appendicitis by the symptoms of that disease.

BERLINER KLINISCHE WOCHENSCHRIFT.

February 5, 1906.

1. Huntington's Chorea in Youth, By F. LANGE.
2. Metabolism of Various Sugars by Diabetics, By V. PETITTI.
3. Ficker's Method in the Diagnosis of Typhoid Fever, By M. MEYERHOFF.
4. Physical Treatment of Chronic Constipation, By E. TOBIAS.
5. Endoscopy of the Urethra, By H. GOLDSCHMIDT.
6. The Indications for Treatment by the Röntgen Rays in Skin Diseases, By C. BRUHNS.

1. **Huntington's Chorea.**—Lange reports a case of this character in a young man of twenty-six years of age. Curious forms of involuntary movements and defects of intelligence were noted. An additional feature of interest in the case lay in the fact that the patient's father, previously a perfectly healthy man, developed a chronic progressive chorea after an accident, from which he died after a lapse of thirteen years. This lends plausibility to the theory that chorea tends to develop at an earlier age in succeeding generations. The psychosis in the case described may be regarded, the author thinks, as a specific choreatic dementia.

2. **Diabetic Metabolism.**—Petitti examined a number of diabetics as to their metabolism with different kinds of sugar. He found that whatever kind was used, if administered by rectum, it was absorbed as such. It could not be proved, however, that the sugar was more thoroughly destroyed in the organism than when given by mouth. No matter how it was given, more sugar was always secreted than usual, and always of a variety which turned the polariscopic light to the right. The author says that milk sugar may be used to advantage by the diabetic. He believes that part of the sugar given in enemata goes directly into the vena cava inferior, a greater part into the liver.

5. **Endoscopy of the Urethra.**—Goldschmidt first dilates the urethra with air or with water. With a tube about four and a half inches in length he is then enabled to inspect almost the entire urethra. The crypts and openings of the glands are especially easily visible.

6. **Röntgen Rays in Dermatology.**—Bruhns has had favorable results from the use the Röntgen rays in cases of chronic dry eczema, chronic circumscribed neurodermitis, local pruritus, verrucous lichen ruber, favus, parasitic and nonparasitic sycosis, chronic furunculosis of the neck, psoriasis, hypertrichosis, and warts. His results have been fair in some cases of malignant growths, in mycosis, fungoides, and rhinoscleroma.

ZENTRALBLATT FUER GYNAEKOLOGIE.

February 17, 1906.

1. Garrulitas Vulvæ, By J. VEIT.
2. An Improved Speculum for the Abdominal Wound, By STOECKEL.
3. Operative Correction of Deviations of the Uterus, By M. SPERLING.
4. Fibroma of the Ovary, By C. RINDFLEISCH.
5. The First Menstruation After an Abortion, By B. ENGLÄNDER.

1. **Garrulitas Vulvæ.**—Veit is convinced that there are two varieties of this remarkable condition, one due to gas forming bacteria in the vagina, the other to undue or unusual pressure of the abdominal muscles. The treatment of the former variety, in one of his

cases, with glycerin tampons, promptly cured the complaint.

5. **Menstruation After Abortion.**—Engländer has followed up fifty-seven cases of abortion to ascertain the period of their first subsequent menstruation. In 64.9 per cent. the menses reappeared in four weeks, in five weeks in 14 per cent., and the remainder varied, one patient going as long as six weeks after the abortion before menstruating. After labor, it is usually six to eight weeks before patients menstruate.

ZENTRALBLATT FUER INNERE MEDIZIN.

February 17, 1906.

1. The Nutritious Value of Fish Meat, By G. ROSENFELD.
1. **Fish Meat.**—Rosenfeld concludes from his studies that the meat of fish makes as much muscular work possible as beef. It contains a greater percentage of proteids than beef and causes as long a feeling of satisfaction as the latter. It causes as much or less, but not more, urea as half. It is, therefore, to be recommended as a food, as well as beef, to peasants, athletes, and persons in the army and navy.

RIFORMA MEDICA.

February 4, 1906.

1. A Case of Gallstones in the Biliary Ducts, and of Absence of the Gallbladder, By VITTORIO PEREGO.
2. Clinical and Bacteriological Researches on Some Rare Forms of Typhoid Fever, By AGOSTINO BRUNO.
3. Contribution to the Surgery of the Stomach. (*To be continued*), By N. GIANETTASIO.

1. **Case of Gallstones, and Absence of Gallbladder.**—Perego's case occurred in a woman, aged fifty-eight years, who had suffered from increasingly severe attacks of biliary colic, to which later were added persistent jaundice and other signs of biliary obstruction. On laparotomy the gallbladder was found to be completely absent and a calculus to be impacted in the common duct. This stone was removed after incising the duct, and no further obstructions were found on probing in the rest of the biliary passages. The wound in the duct was sutured and a drain inserted down to the deep wound. The patient made an excellent recovery.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

February 4, 1906.

1. Some Points on the Prognosis of Typhoid Fever, By CURLO and GOGGIA.
2. The So Called Methylene Blue Reaction, By MARIO CARLETTI.
3. Contribution to the Study of Severe Jaundice in Gestation, By PIETRO GIOIELLI.
4. An Epidemic of Measles (Six Hundred Cases), By E. LEONARDI.

1. **Criteria in the Prognosis of Typhoid Fever.**—Curlo and Goggia contribute an interesting clinical and experimental study of the prognosis of typhoid fever. As early as 1873 Louis wrote that a moderately accelerated pulse rate was indicative of a favorable prognosis and a brief duration of the disease. The authors are at present engaged in studying statistically the relation of pulse and temperature ratios to the prognosis of typhoid fever, but in the present article give the results of their studies as to the arterial pressure and the agglutinating power of the blood in their relation to the prognosis of the disease. They found that a relative slowness of the pulse goes hand in hand with a high proportion in which the serum agglutinates cultures of the typhoid bacillus. A good prognosis may be made, therefore, when the pulse is relatively slow and the agglutinating power high, while a bad prognosis may be made when the pulse is rapid and the agglutinating power of the serum is low. The two factors must, however, be observed simultaneously.

2. **The So Called Methylene Blue Reaction in the Urine.**—Carletto discusses the clinical value of a reaction known as the methylene blue reaction, which

was described by Russo. The procedure consists in adding to four or five c.c. of urine four drops of a solution of chemically pure methylene blue to one part in a thousand of water. The mixture is then shaken until it becomes uniformly colored. If the color be green or emerald, the reaction is positive, while if the color is blue the reaction is negative. Russo claimed that it was a practical substitute for the diazo reaction, and was easy of execution as well as accurate in results, that this reaction was constantly present in typhoid fever, and that one could tell the stage of the disease by the color of the urine after the addition of the methylene blue. Experiments conducted by Carletto, however, showed that the methylene blue reaction did not possess any clinical value, and that the test did not correspond to the diazo test.

ROUSSKY VRATCH

January 14, 1906.

1. A Rare Relation of the Median Nerve to the Brachial Artery, By I. V. GEORGIEVSKI.
2. A Case of Extensive Resection of the Small Intestines. By N. I. SPASSOKUKOTSKAYA.
3. The Ætiology of Paratyphus. The Bacillus Paratyphoid B in Dogs, and Its Relation to the Typhoid Bacillus, By V. N. KLIMENKO.
4. Modern Methods of Examining the Acuteness of Hearing with the Aid of the Voice, By V. I. VOYATCHEK.

1. **Abnormal Relations of Median Nerve.**—Georgievski describes an anatomical preparation of the forearm of a woman, in which the median nerve remained at the outer side of the brachial artery and did not, as it does normally, cross this artery in order to be situated at the inner aspect of the vessel at the lower part of the forearm. Such cases are extremely rare.

2. **Resection of Large Portion of Small Intestine.**—Spassokukotskaya reports a case of strangulated inguinal hernia in which a resection of 318 centimetres of small intestine was performed on account of the gangrenous condition of the gut. The intestines were reunited by means of a Murphy button. The patient made a good recovery. The resection of such large portions of gut is not frequently recorded, the longest resected portion on record being probably 365 centimetres in length, in a case reported by Obalinski. A striking feature in the convalescence of the patient whose history is reported in the present article was that in spite of strict diet he continued to void fluid stools, the frequency of which was reduced from three daily to one in twenty-four hours by means of repeated doses of bismuth subnitrate. Liquid diet was maintained for nineteen days, then semisolid diet was given and the stools gradually became more firm, until they were practically normal on the forty-second day.

3. **Paratyphoid Bacillus.**—In 1903 Klimenko isolated from the liver of a puppy a bacillus which corresponded to the paratyphoid B bacillus. He then immunized a rabbit and a dog against this germ and obtained the serum of the dog. This serum agglutinated the bacillus in question, as well as the paratyphoid B bacillus, the former in a dilution of 1 to 1,600, the latter in a dilution of 1 to 800. Klimenko, therefore, concluded that the bacillus which he discovered in dogs was the type B of the paratyphoid bacillus and named it *Bacillus paratyphosus B e cane*. Dogs which were fed with this germ remained perfectly well and voided the germ in their excreta. This may account for the sporadic appearance of paratyphoid fever, as well as the occurrence of epidemics of the disease.

4. **Examination of Hearing with the Aid of Voice.**—Voyatchek formulates sets of rules and standards for the purpose of making more accurate the testing of hearing with the aid of spoken or whispered words. The author has compiled tables of words which are to be spoken or whispered at a standard distance from the patient's ear, and a failure to hear these at this

distance indicates a defect in hearing. As the words used are in Russian, it is impossible to give an analysis of the classes of phonic combinations recommended. The author enters a strong plea for the more scientific application of these comparatively simple tests for hearing.

SURGERY, GYNÆCOLOGY AND OBSTETRICS.

February, 1906.

1. Adenoma of the Thyreoid Gland; a Clinical and Pathological Study, By JOSEPH C. BLOODGOOD.
2. My Procedure for Retrodisplacement of the Uterus, By TH. TUFFIER.
3. Has Experience Sustained the More Radical Operation for Cancer of Uterus, By JOHN G. CLARK.
4. The Gonococcus in the Puerperium, with Report of Seventeen Cases, By W. S. STONE and ELLICE McDONALD.
5. Three Years' Experience with Pyroloplasty, By JOHN M. T. FINNEY.
6. Foreign Bodies in the Œsophagus, By STEWART MCGUIRE.
7. Scopolamine-Morphine-Ethyl-Chloride-Ether Anæsthesia, By H. A. ROYSTER.
8. Gonorrhœal Exostosis of the Os Calcis, By WILLIAM S. BAER.
9. Two Cases of Aneurysm, By F. W. PARHAM.
10. Starvation and Locking the Bowels for From Ten Days to Ten Weeks, By HOWARD A. KELLEY.
11. Postoperative Cystitis in Women; Its Cause and Prevention, with Special Reference to the Form Appearing After the Radical Abdominal Operations for Uterine Cancer, By FRED J. TAUSSIG.

1. **Adenoma of the Thyreoid Gland. A Clinical and Pathological Study.**—Bloodgood reports twenty-one cases of adenoma of the thyreoid gland. The age of the patients at the onset was from two to forty-two years, in two instances the tumor was congenital, and in one the age was four years; every patient was a female. There seems to be some relation between the onset of adenoma and puberty and pregnancy. One patient developed an adenoma after pneumonia, while one had a family history of goitre; and in only four did the age of the onset suggest the possibility of a malignant tumor. The duration of the tumor has varied from two to twenty-nine years. In three cases of adenoma the tumor was outside the thyreoid gland. The author divides his twenty-one cases into the following groups: Multiple foetal adenoma (3), single foetal adenoma (6), single colloid adenoma (5), and mixed single adenoma (7). The article is splendidly illustrated.

4. **The Gonococcus in the Puerperium, with Report of Seventeen Cases.**—Stone and McDonald, from observations in seventeen cases, think that gonococcus infection is present in a much larger proportion of patients than is usually supposed. The temperature curves of those patients having fever were so varied, and differed so much one from another, that no reliance could be placed upon this as an aid to diagnosis. The puerperal state has a direct influence upon the course of the disease. Gonorrhœa, which has been latent before labor, commonly spreads upward with rapidity during the puerperium. Furthermore, gonorrhœal infection is a frequent cause of abortion, and in all cases of late abortion this should be considered.

7. **Scopolamine-Morphine-Ethyl-Chloride-Ether Anæsthesia.**—Royster draws from his observations the conclusions that (1) ether is the safest general anæsthetic; (2) ethyl chloride secures the pleasantest primary narcosis; and, (3) the preliminary use of scopolamine with morphine increases the patient's mental resisting power and lessens the quantity of ether. But a note of warning should be sounded in regard to scopolamine. A few deaths have followed its use, even of a single dose, and whether or not attributable to scopolamine, it is enough to show that it is not harmless. Moreover, the appearance of the patients under its influence associated with morphine has been such as to alarm the operator.

9. **Two Cases of Aneurysm.**—Parham, judging from two operations, is of the opinion that the Matatz procedure of reconstructing is indicated in the practicability of laying open and inspecting the sac, and the possibility of applying a constrictor, clamp, or temporary ligature to the proximal side of the tumor; the temporary continuance of the main stream will be a great advantage until the subsidence of œdema consequent upon the evacuation of the sac shall have somewhat relieved the stress upon the collateral vessels, besides it is feasible at a secondary operation again to open the sac and close the arterial openings. The operation of suture within the sac is to be preferred to ligature, because every possible part of artery is saved, except that actually forming the sac of the aneurysm. Suture accomplishes simple approximation of the intima, and does not cut through, as may happen with ligature of an atheromatous artery, besides all collateral bleeding in the sac is stopped by direct suture.

Proceedings of Societies.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of December 7, 1905.

The President, Dr. RICHARD C. NORRIS, in the chair.

The Uterus and Ovary of Neurasthenia.—Dr. ROBERT L. DICKINSON, of New York, presented this study, which was restricted to the chronic and aggravated type of neurasthenia, and was based upon full histories of a hundred cases. The subject was considered under various subdivisions. The majority of observers, the author said, were on one side and agreed with Binswanger that if a woman, not an hereditary neuropath, had a chronic pelvic affection, and some local nervous manifestation occurred secondarily, treatment of the pelvic lesion often produced an astonishing degree of improvement in the consecutive disorders. But when a woman's nervous system was entirely compromised, local treatment was almost impotent to secure improvement, and the neurasthenia might be aggravated.

The author excluded from his list the congenitally delicate, the hysterical, the melancholic, and all not subject to long observation. All complained of sacral pain, forty-six of cramps at the menstrual periods, forty-three of irritable bladder, and twenty-four of leucorrhœa, while ten were entirely free from any pelvic disturbance except backache. The averages of ante-flexion and retroversion usual in gynæcological office practice were found. Among twenty-one retroversions, there were ten operations, all resulting in anatomical cures, but producing only partial relief. All were glad for a short time after an operation, but only two were entirely happy about it two years after. The frequent endometritis furnished no material to the curette. Chronic oophoritis, present in gynæcological practice in some fifteen per cent. of cases, was seen with surprising frequency. Of twenty confirmed neurasthenics (some outside this series) whose ovaries were studied at coeliotomies, twenty had distinct microcystic oophoritis. Long continued tension resulting in alterations in the walls of the vessels of the endometrium and uterine walls was emphasized in this class of cases. In four cases intractable menorrhagia called for hysterectomy. The holding up of varicosities of the broad ligament and bladder wall on a pessary explained some improvements. Endometrium, uterine wall, ovary, bladder base, rectal mucosa—all suffered from disturbed vasomotor balance, persistent venous engorgement, sometimes arterial spasm and thickening.

Masturbation, shown by pronounced corrugated hypertrophies of the labia minora, prepuce, and fourchette, and an enlarged and tabbed meatus (found in one third of the ordinary office gynæcological patients) was detected in two thirds of the pronounced neurasthenics.

While hysteria and insanity and the neuroses in general in their clinical connection with diseases of women were studied, it was stated that what was new in this small series of cases was the analysis, from the standpoint of the gynæcologist, of the relations of pelvic disease to long standing neurasthenia, the allegation of the frequency of chronic ovarian changes, of chronic congestions of the trigonum and lower bowel, and of vulvar hypertrophies; the statement that laterocession and thickening of the left uterosacral ligament and broad ligament, with left sided oophoritis, in the absence of adhesion, was always due to chronic proctitis, and figures bearing on the small percentage of cures after operation. In conclusion, the author laid great stress on regulation of activities, on training in outdoor life initiated in wisely conducted sanatoria.

Dr. F. X. DERCUM agreed with Dr. Dickinson that in the great majority of cases pelvic disease and neurasthenia, when coexistent, were coincident, and thought that there was no causal relation whatever between them. One factor, however, to be considered was that neurasthenia, pure and simple, was synonymous with chronic nervous fatigue. The symptoms were characteristic and definite, and the affection constituted a well defined fatigue neurosis. The cardinal features were mentioned, all indicative of a ready exhaustion upon slight exertion. Associated with this exhaustion there was irritability. In consequence there was in neurasthenia an undue reaction of the nervous system to either peripheral or somatic impressions. For this reason local pathological conditions might bring about undue reaction in neurasthenia, while in a state of nervous health such conditions might attract no attention. Illustrative of this, he remarked that an eye defect might remain undiscovered for years until for some cause neurasthenia was established. Such a person might find that headache resulted from the use of his eyes, showing that his resistance to fatigue had been diminished. This fact applied to all visceral affections, among which were, of course, pelvic disorders. He entirely agreed with Dr. Dickinson that in the chronic and aggravated type of neurasthenia in women pelvic symptoms were prominent. He formulated his conclusions upon the subject of neurasthenia in women as follows: 1. Neurasthenia may exist independently of any pelvic disease. 2. Neurasthenia and pelvic disease may exist independently in the same patient. 3. When pelvic disease and neurasthenia coexist, the pelvic symptoms may be more readily recognized by the patient and therefore become more prominent, because in neurasthenia the reaction of the nervous system to pathological impressions is exaggerated.

He was much pleased with the position taken by Dr. Dickinson regarding the entire question of pelvic disease and neurasthenia. Pelvic disease, he said, never caused true neurasthenia. It might, of course, produce general ill health, but the nervous symptoms were never the symptoms of neurasthenia. That various signs of nervous weakness should be present in serious, local or general disease weakening the entire organism and with it the nervous system, was not surprising. To this state he applied the term spurious neurasthenia, or neurasthenia symptomatica. This was seen in chlorosis, phthisis, syphilis, various diseases of the blood, malignant disease, the toxæmias, and other grave disturbances of nutrition. The nervous symptoms directly due to pelvic disorders were exceedingly limited. While it was true that there were present pelvic pain and pain referred to the back, to the hips, to the thighs, with indications of general ill health, these symptoms could not be grouped as a separate nervous disorder, but were part of the pelvic disease itself. The doctrine of reflex nervous disorders had been entirely dissipated by an increasing knowledge of the various functional diseases to which the nervous system was liable. A dis-

passionate consideration of the subject led to no other conclusion than that the surgeon should operate on surgical indications only. The minor pelvic troubles would be found to disappear upon the institution of rest, full feeding, massage, and the like, and when the general health of the patient had been brought to a physiological level.

In answer to a question by Dr. Dickinson, he said that neurasthenia had nothing to do with arteriosclerosis; such nervous symptoms as might be present in arteriosclerosis belonged to the symptom group of arteriosclerosis and not to neurasthenia, and could only constitute a spurious, or symptomatic, neurasthenia.

Dr. BARTON COOKE HIRST said that in his service of some fifteen years at the Orthopædic Hospital he had had an opportunity every year to examine many nervous patients, and this experience had taught him that the gynecologist would do better if he forgot that the patient under examination was a neurasthenic, or if he did not know it. In his opinion the function of the specialist in pelvic disorders was to examine and report upon the pelvic organs, and if disease was found, to give the appropriate advice without necessarily taking into account the patient's general condition, except as a contraindication to operation. If pelvic disease coincident with neurasthenia was discovered, it should be remedied, if possible, in order, by the cure of the pelvic disorder, to put the patient in a better condition for being cured of her neurasthenia, but without expecting that the gynecological treatment would directly benefit the neurasthenia. A further lesson was, if possible, to avoid long continued local treatment for minor pelvic conditions, which might fasten the treatment habit on the woman. This particularly applied to difficulties with the bladder.

Dr. HIRST regretted the absence of expressions of opinion regarding the only characteristic pelvic lesion of neurasthenia—the ill development of the pelvic organs. In his examination of numbers of nervous patients the large proportion of such cases had been marked. Whether the condition was coincident with the neurasthenia, or whether it preceded it and was congenital, he thought a question of interest. He regarded it as probably congenital and as simply marking an ill development of the whole organism. He thought that everybody was in accord with Dr. Dickinson's views relative to the gynecological treatment of neurasthenic patients. The time had passed when the neurologist would recommend the treatment of pelvic disease with the idea of curing nervous disorders; also the gynecologist of to-day was not open to the accusation of unnecessarily operating upon neurasthenic patients.

Dr. CHARLES K. MILLS expressed as being of almost the reverse way of thinking of that voiced by Dr. Hirst, that the neurasthenic condition should be lost sight of and attention and treatment concentrated upon the pelvic disorder. He thought the whole question returned to a discussion of the fundamental nature of the cases observed. His large experience with neurogynecological cases had taught him that in many of the cases the conditions presented to the neurologist and gynecologist were dependent on neurotic or neuropathic tendencies in the individual. In the study of aggravated nervous symptoms apparently dependent upon disorders of the pelvic organs, the exact cause should be determined, whether it lay in the pelvic condition or in the nervous constitution. In a large majority of cases the explanation was to be found in a study of hereditary predispositions. Attention should be directed to the presence of any real disorders of the pelvic organs, in connection with other treatment. Neurasthenia, like hysteria, was not a disease of the uterus or its appendages, but was primarily a disease of the nervous system. Attention should be directed to the

relief of an inherited, or of an inherited plus an acquired, condition of the nervous system. He was largely in accord with the views of Dr. Dickinson.

Dr. J. M. BALDY stated that few competent gynecologists of to-day operated in aggravated cases of neurasthenia. Unlike Dr. Hirst, he thought that, if, when these cases came to the gynecologist, he could forget that they had pelvic symptoms, both the patients and the gynecologists would be fortunate. He personally was not greatly impressed with the large percentage of pelvic disorders found by Dr. Dickinson, and thought that an examination of as many nonneurasthenic women would disclose much the same condition. By way of illustration, he said that an observation of the noses of several present would show a great variety, but all were noses, all healthy and all normal, in spite of the fact that they had at times been afflicted with inflammations and catarrhs. So with the pelvic organs there was a wide range of difference in health from what the books were pleased to write down as normal. The pathologist, he thought, was prone to take too little note of this fact. Most of these minor conditions, he believed, if not giving undue symptoms, might be looked upon as normal. With Dr. Mills and Dr. Dercum, he did not believe that neurasthenia was caused by pelvic lesions, although it might be aggravated in some few cases. An operation, except in a very few well selected cases, could only do harm. Beyond falling into the hands of an operating gynecologist, he knew of but one equal misfortune for these much afflicted individuals, and that was to fall into the hands of a rest cure neurologist. He feared that his emphatic views concerning the treatment of neurasthenia would not accord with those of the majority of either the neurologists or the gynecologists. The element of fatigue was purely a nerve fatigue and not muscular. Rest was needed, but only as applied to the nerves, and the rest needed was rest from the irritating elements which were wrecking those organs. Let no man, however, who wished to cure his patient make the mistake of assuming that rest meant rest of the muscles and general physique. What was needed in these cases was, metaphorically speaking, a strong, determined man with a horsewhip who would, as soon as breakfast was over, drive the patient out of doors and keep her there until dark. This would carry with it everything implied in an outdoor life, exercise and muscular fatigue up to the point of experiencing the delight of real refreshing rest after real fatigue. This could not be brought about abruptly or in the same manner in all classes of patients, but the principle could be applied in all, which was, to a large extent, to ignore the symptoms and force the patient, in spite of all pretexts, protests, or sympathies, to an active outdoor life, with proper hours of rest and regulated diet, milk and eggs constituting a large element in the latter. The rest cure in any of its phases was pernicious, and sanatoria were the last places in the world for these patients.

Dr. WILLIAM G. SPILLER did not believe that neurasthenia in most cases could be cured by treatment of the generative organs. He was in accord with the view that in the presence of mild disorders of the reproductive organs it was better not to give any treatment to these organs, because attention directed to them aggravated the neurasthenic symptoms. If, however, the symptoms of disease of the generative organs were severe, he advised treatment of the lesions, because until they were treated there was little hope of improving the neurasthenia. He quoted Krafft-Ebing's statement that, out of 250 neurasthenic females, he had been able in only nine to find a relation between the reproductive organs and the neurasthenia. Dr. Spiller believed that removal of the ovaries was one of the most serious operations that could be performed on a neurasthenic

woman; not from a surgical point of view, but the neurasthenic women who had had ovaries removed were often hysterical and were among the most difficult patients to treat. He believed that the ovaries must have some effect upon the general health of the individual, especially in young women. Regarding the possibility of a relation between disorders of the reproductive organs and brain tumor, he thought that the idea of the former standing to the latter in the relation of a cause seemed exceedingly far fetched, and it was, in his opinion, to be rejected; but the effect of brain tumor in arresting menstruation had repeatedly been observed. Regarding functional disorders, it must be acknowledged that severe disease of the ovaries leading to removal might awaken a latent neurosis which otherwise might never become manifest.

He believed there was much to be said in favor of Dr. Baldy's plan. He had at the time a neurasthenic patient who would not get up until late in the day and was lazy. He had directed the nurse to use not the horsewhip, but moral suasion, to induce the woman to take exercise in moderation and to forget her ills.

Dr. JOHN G. CLARK said that it was interesting to recall the fact that Charcot had been one of the first neurologists to invade the gynecological field. While the discussion did not bear directly upon hysteria, nevertheless, in the minds of many physicians, neurasthenia and hysteria were almost interchangeable terms, notwithstanding the wide difference between the two conditions. Charcot had described a type of hysteria associated with ovarian pain and defined a point at the intersection of a line drawn from the anterior superior spine of the ilium and the outer border of the rectus muscle, which had been designated as "Charcot's point." This class of patients complained constantly of pain in this area. The point did not correspond to the situation of the ovary, and as a result of this fallacy innumerable ovaries had been removed in the past with the thought that the pain would be relieved, which, however, was not realized. From his own observation he was sure that this pain had nothing to do with the ovaries.

The word neurasthenia he thought was used to cover a multitude of evils, serving about the same purpose for various bizarre nervous symptoms that the word malaria did for an unexplained fever. Asthenia with nervous manifestations was classed under the term neurasthenia. From a clinical standpoint he believed the gynecologist might safely consider these cases under one of three headings: 1. Pure neurasthenia of congenital origin, with morbid pelvic introspection, but without even a microscopic organic lesion. 2. A neurasthenia which was coincident with a given organic lesion, but not dependent upon it, although it might greatly exaggerate it. 3. A neurasthenia entirely dependent upon an organic lesion.

The patient with neurasthenia of hereditary origin should never have gynecological treatment, but should be turned over to the neurologist or to any other person capable of diverting the unhealthy stream of her imagination. Such a patient naturally complained of all the ills to which flesh was heir, and if the generative organs became the point of her introspection, the gynecologist did not live who could cure her by operative interference. An operation was likely to establish the operative habit, which had been very appropriately called "*mania operativa minima*."

In the second class of cases, neurasthenia coincident with some pelvic lesion, the nervous symptoms would usually be exaggerated by the pelvic disease; consequently in such a case this trouble was likely to be improved, although a cure of the neurotic phase of the case was naturally not to be expected. In the third class of cases, neurasthenia incident to pelvic lesions, there could be but one viewpoint, and that was, the

quicker the pelvic lesion was relieved the greater would be the chance for perfect cure of the neurasthenia. If such a case drifted on for weeks or months, the neurasthenic habit might be so completely fixed by the time an operation was done that months or years might elapse before such a woman would recover her nervous equilibrium. Such cases were represented by the various hemorrhages of the menopause. Patients suffering from recurring hemorrhages at the menopause or from some new growth, and with increasing anæmia developing intense neurasthenia, should have immediate treatment to stop the hemorrhage, even if hysterectomy was necessary. Such patients made ideal recoveries.

In the treatment of all three of these classes of cases, Dr. Clark believed that the skill of the surgeon was nowhere more completely tested. The whole question pivoted around the history, and every phase of the patient's past life should be traced concerning the various possible manifestations of neurasthenia. The chief point from the operative standpoint was the past history. He felt that he voiced a general sentiment in saying that gynecologists of experience looked upon removal of the ovaries as one of the gravest operations that could be performed. Unfortunately, there were frequently cases of young women suffering with double pyosalpinx, and here the surgeon could only follow the one course open to him in the removal of the organs. Such cases in many instances drifted into the hands of the neurologists, and there was frequently formed an unjust prejudice against the operation or the operator on account of the postoperative sequelæ. Under the stress of pathological conditions, however, the gynecologist had been forced to intervene. A large proportion of these patients, however, after having passed through a stormy premature menopause, regained to a considerable extent their nervous equilibrium and might complete a very satisfactory life work. Happily, the day for the removal of ovaries on symptomatic grounds had passed, and the man who exhibited at society meetings, as had been done in the past, specimens of ovaries which were vaguely classed as cystic or sclerotic, would lay himself open to the severest condemnation.

Dr. Clark believed that the gynecologists were greatly indebted to the neurologists for pointing out the radical difference between hysteria and neurasthenia. Gynecologists, as well as other surgeons, also had been able to render a reciprocal service by demonstrating the value of operative treatment in the proper classes of neurasthenics.

Dr. CHARLES P. NOBLE thought that the majority of gynecologists believed that neurasthenia and hysteria existed, not only independently of trouble in the pelvis, but concomitantly with it. He believed firmly in the existence of reflex disorders, and had seen many cases of return to health after the correction of some pelvic condition. With this one exception, he was in hearty accord with all the neurologists had said upon general principles. It was his opinion that the gynecologist should deal with a patient with neurasthenia or hysteria associated with pelvic disease as he would deal with an insane patient presenting these disorders. If the pelvic condition threatened the patient's life, it should be corrected. It would then be easier to solve the question of any remaining difficulty. The manner of dealing with such patients depended upon the financial circumstances of the patient. It was Dr. Noble's experience that there was no way in the city whereby a neurasthenic in poor circumstances could be treated by the rest cure. In the few places where they could be admitted they received no benefit in the general wards.

He thought the cases mentioned by Dr. Hirst were those of ill developed nervous systems rather than of neurasthenia. He had sent a number of such cases to

the late Dr. Harrison Allen, who had desired to study them from his standpoint, and defective physical development was present in all, indicating defective nervous systems as well.

Regarding the treatment of patients with nervous symptoms, Dr. Noble disapproved of local treatment for functional symptoms without local lesion in young, unmarried women. He believed that there were instances of lives ruined by these young women becoming tied to physicians' offices and acquiring psychoses with regard to their sexual organs.

Dr. WILLIAM E. ASHTON referred to true neurasthenia and to the conditions of nervous disorder dependent upon local lesions, and thought that until the neurologist could positively distinguish between neurasthenia and neurasthenoid conditions it was unnecessary for him to consult with the surgeon. No neurologist was justified in placing such patients in rest cures without knowing the condition of the pelvic organs. While he did not believe that a diseased pelvic organ produced essential neurasthenia, he did hold that a large number of women not benefited by rest cures were afterward permanently cured by an operation for some gross pelvic lesion. He emphasized the fact that, unless the actual condition of the pelvis was known, the patient should not be treated in a rest cure. Dr. Dickinson's statistics—so many cases of mucocystic conditions of the ovaries, so many of neurasthenia—did not interest him any more than the question of what the victims of apoplexy had in their pockets at the time of seizure, and he thought that such detail was irrelevant. In neurasthenic or pseudoneurasthenic cases he believed that, in the presence of gross pelvic lesions, an operation should be done for a cure, whether or not the neurologist was certain of the diagnosis. The operation should be carefully considered. He believed the removal of enlarged cystic ovaries in a neurasthenic woman was not wise. Resection of the diseased portion alone allowed of the possibility of pregnancy and the continuance of menstruation. If the neurasthenoid patients with gross pelvic lesions who were operated upon and not cured could, after leaving the general hospital, go to a good rest cure—as they could if they had the means—results would be obtained where at present there were absolute failures.

Dr. J. MADISON TAYLOR thought that in the consultations of the gynecologist and the neurologist little would be left for the general practitioner to do. In the cases showing arrested development good results would be secured as opportunity was given for better development.

Dr. DERCUM thought it well known that visceral conditions must play only a secondary rôle in neurasthenia.

Dr. DICKINSON said that it was only in Philadelphia that mention of a sanatorium meant a rest cure and a city rest cure. The country sanatorium to which he had reference taught the patient exactly that which Dr. Baldy had indicated, outdoor living and the balancing of the muscular system against the nervous. With reference to Dr. Dercum's statement that the fatigue neurosis was the pathological explanation of neurasthenia, he had tried to specify that the conditions he had grouped belonged to the cases of long standing. Such patients had been living for years under the high tension which might be called "Americanitis." This caused definite alteration in the bloodvessels. In certain women there were chronic vascular changes in the pelvic organs. This was the only common heading under which he could group most of these pelvic conditions.

Regarding the ill development of the pelvic organs, he had carefully ruled out the congenital cases, referring rather to those acquired; women originally strong and vigorous, who, through long years of attendance

upon an invalid or other strain, had come into this condition of fatigue and vessel change.

In the matter of an operation, it should never be forgotten that the shock of it might give rise to an increase of the severity of the nerve exhaustion in no small number of cases. This he considered a grave and definite danger, and said that each risk should be carefully weighed. He thought that in this respect the women physicians could teach much, owing to their greater knowledge of the surroundings and home conditions of their patients than that of the surgeons. Since there was no positive knowledge of what the healthy ovary was, and owing to the little opportunity of studying it, he had made certain groupings of the minor abnormalities and qualified each group.

Referring to Dr. Clark's mention of Charcot's point, particularly on the left side, he urged that in every patient complaining of left sided pain and tenderness the rectum be examined. In a large majority this examination would show congestion or varicosity and chronic sigmoiditis.

He quoted Kroenig as saying that between the neurasthenic state and pelvic disease there was no causal relation. Operations in the absence of good antecedent and subsequent histories were poor material on which to base conclusions. Regarding the "horsewhip" treatment, he had laid particular stress upon the advantages of outdoor life.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

SECTION IN GENERAL MEDICINE.

Meeting of January 8, 1906.

The President, Dr. SAMUEL McC. HAMILL, in the chair.

Clinical Experiences with Exophthalmic Goitre.—Dr. GEORGE DICK, of Ann Arbor, Mich., referred to the frequency of simple goitre in Michigan and surrounding States, and said that exophthalmic goitre also seemed to be unusually prevalent. Out of about 4,000 medical patients, thirty-two had exophthalmic goitre. Cretinism and myxœdema were rare in that section. Twenty-nine of the cases were in women and three in men. All had distinct Graves's disease, though in some it had been incomplete for a part of the time that they were under observation. The youngest was nineteen; the oldest fifty-five. The histories gave comparatively little proof of the relation of shock, worry, care, etc. In twelve cases there was a goitre long before the other symptoms came on, from three to thirty-seven years. Goitre was present in all cases, but small in three, and not known to the patients in some others. The conditions of the heart, great vessels, eyes, skin, nervous system, etc., showed no great departure from the well known type. Blood pressure observations showed a great difference in systolic pressure. In many cases it was high, up to 160 to 180, and in others as low as 100. There was no great change of blood pressure under treatment. The blood showed anæmia in comparatively few cases, the most striking feature being relatively low leucocytosis. Observations on the gastric juice showed hypochlorhydria or achlorhydria in a number of cases, with good motility, but low peptic power. One patient died from the disease, and one died from pelvic suppuration. In the fourteen still under observation or heard from, the disease showed considerable variation in duration. Several patients were well enough to do their usual work, but none were entirely free from signs. Dr. Dick spoke of the importance of careful diagnosis in mild cases; many that could be readily detected were treated as if they were anæmia, nervous prostration, palpitation, etc. Dr. Dick spoke briefly of the pathology and pathological anatomy and of the prognosis. Under treatment,

he called special attention to the importance of rest, diet, rational mode of life, and symptomatic treatment as indicated. Some experiments with certain organic products were described, showing that none of these substances were as yet satisfactory. X ray treatment was used in two cases, with very little effect on the goitres and none on the other symptoms.

The Medical Treatment of Exophthalmic Goitre.—Dr. JAMES TYSON said that at best this was unsatisfactory, because there could be no scientific treatment so long as there was a limited definite knowledge of the pathology. If, as seemed probable, the disease was due to a deranged secretion of the thyroid gland, experience with analogous diseases suggested the possibility of the discovery of an antitoxine which would counteract the symptoms. This idea was strengthened by the results of the studies of Dr. Rogers and Dr. Torrey, of New York. On the other hand, it was well known that patients with exophthalmic goitre recovered without the aid of such specific agent. In his experience he had known of but one fatal case. Many cases had passed from under his observation, either totally or partially unrelieved. In the treatment patients should have rest and protection from excitement. In mild cases of short duration this alone might effect a cure. Alcoholic stimulants and stimulating, indigestible foods were contraindicated. The food, however, should be nourishing. Prohibition might sometimes extend to tea and coffee. Sexual indulgence should be forbidden. The bromides and digitalis should be given in moderate doses at first; indeed, massive doses were contraindicated, and if the tachycardia did not subside under moderate doses of digitalis or strophanthus, they should be discontinued. Ten to fifteen minims of the new tincture three or, at most, four times a day should not be exceeded. Of the bromides, fifteen grains four times a day was considered the maximum dose. He had found veratum viride in lieu of digitalis to act well in conjunction with bromides; in like manner aconite might be expected to be of service where there was strong cardiac action. He had had no experience with ergot. Belladonna was useful in certain cardiac cases, and he especially advocated the use of a fresh belladonna plaster over the region of the heart.

He quoted Professor William H. Thomson as ascribing Graves's disease to gastrointestinal ptomaine poisoning, due to excessive meat ingestion, and accordingly insisting upon the absolute restriction to a milk diet for two years.

The undoubted relief afforded by operative treatment in certain instances, on the other hand, would seem to show that if the symptoms were due to a toxine, that toxine was developed in the thyroid gland itself. Among other special treatments was mentioned that with suprarenal extract, in tablet form, five grains at a dose, recommended by Dr. James C. Wilson. Treatment by thyroid extract, theoretically, should make the disease worse, and experience tended to confirm this, though such a result had not been invariable. On the other hand, reference was made to some evidence that thymus extract had seemed to be beneficial in 10 to 15 grain doses. He mentioned the efficacy of nuxvomica in a case under the care of Dr. Hunsberger, of Skippack, Pa. Dr. Tyson would expect codeine to be superior to opium. Iodides were mentioned as of doubtful value, but iron and arsenic should be beneficial. He had been rather skeptical of the results alleged for electricity, and he had had no experience with it. Brine and Nauheim baths he would expect to be helpful, and probably, too, massage, although the latter should be gentle at first and discontinued if not well borne. The rationale of all measures recommended other than antitoxic must be that they were such as maintained the healthful functions of the organism

while it was by its excretory organs casting out the toxic agencies which were responsible for the disease. The operative treatment and the antitoxic treatment, when discovered, did this more promptly, but some fourteen per cent., it was said, perished of the operation.

The Pathogenesis of Exophthalmic Goitre.—Dr. W. G. MACCALLUM, of Baltimore, said that the weight of evidence was in favor of the view that the thyroid played a predominant rôle in Graves's disease. The changes in the thyroid, however, were due to another primary cause. Several recent authors had maintained that there was no specific histological alteration of the thyroid in this disease (Reinbach, Kocher), but in the series under Dr. MacCallum's observation the well known changes had been constant, but not always in the same intensity. In some early cases or in mild cases the change was focal, small patches of tissue showing the irregular alveoli, high epithelium, and loss of colloid, while the surrounding tissue was practically normal. Such changes might be overlooked, especially if the patient had also a colloid goitre, as so often occurred in Switzerland. He thought it difficult to prove that the thyroid secreted more actively than normal, but the histological appearance was that of thyroid tissue which was hypertrophied in response to the operative removal of a large portion of the gland. Further, the blood supply was excessively rich and further administration of thyroid extract to these patients caused an exacerbation of the symptoms, while excision of part of the gland relieved them. He stated that no conclusions could be drawn relative to the amount of colloid secreted by observing coagulated material in the lymphatics, for that was probably lymph plasma. Breuer, he said, maintained that the symptoms of exophthalmic goitre might be simulated by chronic iodine poisoning, and that even the whole clinical picture might be so produced. The solution of the problem of the function of the thyroid, he believed, probably depended upon the elucidation of the relations of iodine in the body. The primary cause of Graves's disease, he thought, seemed to be some injurious agent or irritant which, by causing destruction of part of the thyroid cell, would cause the remainder to hypertrophy. The acute thyroiditis occurring in the course of infectious diseases might produce this effect, and such infections were found to have occurred in a considerable proportion of the cases before the onset of the symptoms. Insufficiency of the parathyroid glands played no part in the production of the disease.

Dr. WILLIAM OSLER, of Oxford, England, expressed the belief that medical treatment was not instituted sufficiently early. Since the disease was a serious one, not often cured, and a distressing one to the patient, he thought it worth while, just as soon as the symptoms were manifest, to subject the patient to a rigid, thorough, systematic treatment of not less than three months' duration, in bed at rest, in the open air, an ice bag on the chest, "and drugs—according to your taste." These he considered to be the essential features in the medical treatment of the disease, and this treatment had yielded results in a remarkable number of patients changed to fairly robust health. In the extreme cases, however, he believed that the surgical treatment offered by far the best hope of permanent cure. Personally, he had been much gratified at the results obtained by his surgical colleague in the cases which he had turned over to him, and thought it probably one of the most remarkable things in life to see within twenty-four hours after the operation a patient transformed from a quivering bundle of nerves, with a high degree of feline restlessness and a heart at 160, to a composed, quiet, rational individual, such as Dr. Bloodgood would remember in one or two remarkable

cases of extreme Graves's disease of the most advanced type. He regarded the operation as a very critical, prolonged, and dangerous one, and said: "When we physicians are handing over our very precious and increasingly diminishing number of patients to the surgeon, it is a very important question that the surgeon operating in exophthalmic goitre should know his business." He pointed out the extreme danger of the operation under general anæsthesia. It should be remembered that the fatal results following the operation were not always due to the operation or to the surgeon, for in a certain limited number of cases there might be acute toxæmia.

Dr. Dock referred briefly to the subject of iodism, which, he said, was an extremely important symptom in the middle of the last century because of the use of iodine for all sorts of diseases. An enormous literature had been developed in which might be seen pictures of acute exophthalmic goitre. By one authority this had been attributed, not to the iodine, but to a poison derived from the thyroid. He emphasized Dr. Osler's caution about care in the selection of the surgeon who should operate in exophthalmic goitre. While he was heartily in favor of surgical treatment in certain cases, he felt that the disease was one in which in certain other cases much could be gained by medical treatment.

Book Notices

Around the World via India. A Medical Tour. By NICHOLAS SENN, M. D., PH. D., LL. D., C. M., Professor of Surgery, University of Chicago, etc. Chicago: American Medical Association Press, 1905. Pp. 347.

The text of this book was originally published as a series of articles in the *Journal of the American Medical Association*. The author has added many new illustrations, all of which are well executed and appropriate to the text.

What the distinguished Chicago surgeon might write on any subject would be of interest to the reader, but this work has for medical men the special charm of including a running commentary on medical affairs among the peoples whose countries the author traveled through. Dr. Senn is quick to take in the points of special importance in such a survey as he was enabled to make, and what he says concerning them teems with incisive expressions of wisdom.

The countries that he visited were the Hawaiian Islands, Samoa, New Zealand, Australia, Ceylon, and India. The medical affairs of all those countries are of special interest to us Americans now that we have acquired a number of outlying possessions in which the natural conditions are very much like those of the regions through which Dr. Senn journeyed. Doubtless the book will be widely read, and it is sure to be highly appreciated.

La Criminalité infantile. Par le Docteur EMILE LAURENT. Paris: A. Maloine, 1906. Pp. 168.

Having had fifteen years of service as a medical school inspector in Paris, the author has jotted down a number of his reflections and meditations, and made them the basis of this little book. As juvenile crime is not unknown to many communities in this country, Dr. Laurent's experiences should prove worthy of notice.

After stating the problem, he discusses the childish mind and spirit and then deals with hereditary influences. The deteriorating effects immoral and unsocial antecedents have on these young and plastic minds is very carefully though briefly considered. A chapter on the influences of education brings out in strong relief the great difficulties that are to be overcome in

the home training. Here vanity on the part of the parents often engenders inefficiency or even antagonism on the part of the teacher, and the children are practically urged to believe that the teachers are their enemies rather than their friends.

Childish vagabonds, lying children, smoking children, and drinking children are then discussed. The lying, stealing, erotic, and violent tendencies in children are then taken up, and the final chapters take up in detail abnormal and mentally diseased children and the general remedies that are to be suggested for the amelioration of many of the conditions described.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the period ending March 12, 1906.

United States.		Cases.		Deaths.	
Places.	Date.				
California—Los Angeles	Feb. 17-24	1			
California—San Francisco	Feb. 17-24	10			
District of Columbia—Washington	Feb. 24-Mar. 3	15			
Florida—Dade County	Feb. 17-24	5			
Florida—Dixie County	Feb. 10-24	27			
Florida—Columbia County	Feb. 10-17	1			
Florida—Jackson County	Feb. 10-24	15		1	
Florida—Orange County	Feb. 17-24	1			
Florida—Polk County	Feb. 10-24	11			
Georgia—Augusta	Feb. 19-Mar. 5	9			
Illinois—Chicago	Feb. 24-Mar. 3	1			
Indiana—Terre Haute	Feb. 24-Mar. 3	1			
Kansas—Leavenworth	Feb. 1-28	1			
Kentucky—Covington	Feb. 24-Mar. 3	2			
Louisiana—New Orleans	Feb. 24-Mar. 3	2			
Maine—Bridgford	Feb. 24-Mar. 3	1			
Maine—Portland	Feb. 24-Mar. 3	1			
Maryland—Baltimore	Feb. 24-Mar. 3	2			
Missouri—St. Louis	Feb. 24-Mar. 3	4			
Montana—Helena	Feb. 1-28	1			
Ohio—Canton	Feb. 17-24	1			
Ohio—Cincinnati	Feb. 23-Mar. 2	8			
Tennessee—Nashville	Feb. 24-Mar. 3	2			
Utah—General	Jan. 1-31	122			
Utah—Ogden	Jan. 1-31	6			
Utah—Ogden	Feb. 1-28	1			
Utah—Salt Lake City	Feb. 17-24	25			
Vermont—Rutland	Feb. 1-28	5			
Washington—General	Jan. 1-31	17			
Wisconsin—Madison	Feb. 24-Mar. 3	2			
Wisconsin—Bellevue	Feb. 24-Mar. 3	2			

Foreign.		Cases.		Deaths.	
Places.	Date.				
Brazil—Pernambuco	Jan. 15-31	2		36	
Canada—Queen's County	Mar. 1	1			
Canada—St. John	Mar. 1	1			
Canada—Toronto	Feb. 17-24	2			
Cuba—Havana	Feb. 18-25	12			
Greece—Athens	Feb. 10-17	4			
Greece—London	Feb. 10-17	2			
India—Bombay	Jan. 31-Feb. 6	1		3	
India—Calcutta	Jan. 20-27	1		102	
India—Kochi	Jan. 28-Feb. 4	12		4	
India—Madras	Jan. 27-Feb. 2	27		27	
India—Rangoon	Jan. 20-27	46		4	
Mexico—Tampico	Feb. 10-27	1		4	
Turkey—Alexandria	Feb. 3-10	20		2	

Yellow Fever.		Cases.		Deaths.	
Places.	Date.				
Mexico—Veracruz	Feb. 11-27	1			
Panama—Bocas del Toro	Feb. 22	1			

Cholera.		Cases.		Deaths.	
Places.	Date.				
India—Calcutta	Jan. 20-27	44			
India—Rangoon	Jan. 20-27	4			

Plague.		Cases.		Deaths.	
Places.	Date.				
Brazil—Pernambuco	Jan. 15-31	1			
India—Calcutta	Jan. 20-27	4,514		3,747	
India—Bombay	Jan. 31-Feb. 6	81			
India—Calcutta	Jan. 20-27	30			
India—Kochi	Jan. 28-Feb. 4	16		14	
India—Madras	Jan. 27-Feb. 2	12		12	
India—Rangoon	Jan. 20-27	33		33	
Japan—Yokohama	Jan. 1-31	48		38	
Peru—Cholista	Jan. 21-31	2		1	
Peru—Lima	Jan. 21-31	3		1	
Peru—Mendoza	Jan. 21-31	2		2	
Peru—Trujillo	Jan. 21-31	14		5	

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending March 7, 1906:

FOWLER, J. B., Acting Assistant Surgeon. Granted one month leave of absence, from March 31, 1906, and excused for a further period, April 30 to June 30, 1906, without pay.

GRACE, J. G., Acting Assistant Surgeon. Granted leave of absence for one month, from March 26, 1906, and excused from duty without pay, April 25 to June 30, 1906.

King, W. W., Passed Assistant Surgeon. Directed to report to the Director of the Hygienic Laboratory for temporary duty.

WARD, W. K., Assistant Surgeon. Granted seven days' leave of absence, from March 3, 1906.

WETMORE, W. O., Acting Assistant Surgeon. Granted four days' extension leave of absence, from February 26, 1906.

Appointments.

Dr. W. R. Brinckerhoff was appointed Director of the Leprosy Investigation Station at Molokai, Territory of Hawaii, from February 2, 1906.

Resignation.

Mathias Walerius resigned as pharmacist of the second class, to take effect March 8, 1906.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army, for the week ending March 10, 1906:

APPEL, D. M., Lieutenant Colonel and Deputy Surgeon General. Relieved from duty in the Philippine Division, to take effect at such time as will enable him to comply with the order, and to proceed on transport sailing from Manila, P. I., after April 27, 1906, to San Francisco, Cal., where, on arrival, he will report by telegraph to the Military Secretary of the Army for further orders.

BISPHAM, WILLIAM N., First Lieutenant and Assistant Surgeon. Ordered to proceed from Fort Logan, Ohio, to Fort D. A. Russell, Wyoming, for temporary duty.

CLAYTON, JERE B., Captain and Assistant Surgeon. Granted two months' leave of absence, to take effect upon being relieved from temporary duty at the United States Military Prison, Fort Leavenworth, Kansas.

HUGGINS, JOHN B., First Lieutenant and Assistant Surgeon. Now at San Francisco, Cal., is assigned to duty in the Army Transport Service, and will report in person to the medical superintendent of that service at San Francisco, Cal.

KEEFER, FRANK R., Major and Surgeon. Having reported at San Francisco, Cal., in compliance with orders heretofore issued, will proceed to the Presidio of Monterey, Cal., and report to the commanding officers of that post for duty.

KIEFFER, CHARLES F., Major and Surgeon. Sick leave of absence extended twenty days.

KIRBY-SMITH, R. M., Captain and Assistant Surgeon. Advanced to the rank of captain, from February 28, 1906.

PAGE, HENRY, Captain and Assistant Surgeon. Upon arrival at San Francisco, Cal., will proceed to Fort Leavenworth, Kansas, and report to the commandant of the United States Military Prison at that post for duty, and by letter to the commanding general, Department of the Missouri, relieving Captain Jere B. Clayton, assistant surgeon.

SHOOK, JAY R., Captain and Assistant Surgeon. Advanced from grade of first lieutenant to that of captain, from March 6, 1906.

VOSE, WILLIAM E., Captain and Assistant Surgeon. Advanced from the grade of first lieutenant to that of captain, from March 6, 1906.

WALES, PHILIP G., Major and Surgeon. Relieved from duty in the Philippines Division and ordered to proceed on transport sailing from Manila, P. I., after July 1, 1906, to San Francisco, Cal., where, upon arrival, ordered to report by telegraph to the Military Secretary of the Army for further orders.

WHITMORE, E. R., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Jay, N. Y., and ordered to Fort Warren, Mass., for duty.

WOODBURY, FRANK T., Captain and Assistant Surgeon. Advanced from the grade of first lieutenant to that of captain, from March 6, 1906.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending March 10, 1906:

BENTON, F. L., Surgeon. Detached from the Naval Hospital, Brooklyn, N. Y., and ordered to the Naval Hospital, Pensacola, Fla.

DENNIS, J. B., Surgeon. Detached from the Naval Hospital, Pensacola, Fla., and ordered to the Naval Proving Grounds, Indian Head, Md.

MCDONELL, W. N., Assistant Surgeon. Detached from the *Celtic* and ordered to the *Yankton*.

PLUMMER, R. W., Passed Assistant Surgeon. Detached from the naval recruiting station, Kansas City, Mo., and ordered to the naval substation, St. Joseph, Mo.

SCHWERIN, L. H., Acting Assistant Surgeon. Ordered to the *Celtic*.

Births, Marriages, and Deaths.

Born.

HUSSEY.—In Berkeley, California, on Thursday, February 22d, to Dr. Samuel W. Hussey, United States Army, and Mrs. Hussey, a daughter.

Married.

BLAIR—COVELL.—In New Orleans, on Saturday, March 3rd, Dr. W. A. Blair and Miss Lucille Covell.

DAVIS—MCPARLIN.—In Baltimore, on Tuesday, February 27th, Dr. I. H. Davis and Miss Eleanor Beale McParlin.

WIRT—BELDING.—In Jacksonville, Florida, on Monday, February 12th, Dr. William E. Wirt and Mrs. Lucy J. Belding.

Died.

ADAMS.—In Mount Vernon, N. Y., on Wednesday, March 7th, Dr. Sanford W. Adams, aged twenty-nine years.

BEARDSLEY.—In Atlantic City, N. J., on Wednesday, March 7th, Dr. Grove S. Beardsley, United States Navy.

BIEBER.—In Phillipsburg, N. J., on Monday, February 26th, Dr. Lewis I. Bieber.

BYSTROM.—In Dobbs Ferry, N. Y., on Friday, March 9th, Dr. Elizabeth N. Bradley Bystrom, aged fifty-three years.

DERBY.—In New York, on Saturday, March 10th, Dr. Edward W. Derby, aged seventy-seven years.

DUNNING.—In Indianapolis, Indiana, on Saturday, February 3rd, Dr. Lehman H. Dunning, aged fifty-five years.

FREEL.—In Stonycreek, Connecticut, on Friday, March 9th, Dr. Francis J. Freel, aged forty-eight years.

HICKMAN.—In Los Angeles, California, on Tuesday, February 27th, Dr. C. E. Hickman, of Minneapolis, aged twenty-five years.

HILL.—In Bloomington, Illinois, on Thursday, March 1st, Dr. William Hill, aged seventy-seven years.

HUTCHINSON.—At sea, on the *St. Louis*, on Tuesday, February 27th, Dr. Robert C. Hutchinson, aged forty-nine years.

LINDSLEY.—In New Haven, Connecticut, on Friday, March 9th, Dr. Charles Augustus Lindsley, aged seventy-nine years.

MITCHELL.—In Sharp's Wharf, Virginia, on Wednesday, February 28th, Dr. Laurence G. Mitchell, aged forty-four years.

MURRAY.—In Philadelphia, on Monday, February 26th, Dr. Thomas Walker Murray, aged forty-six years.

RICHARDSON.—In Norristown, Pennsylvania, on Wednesday, March 7th, Dr. David R. Richardson, aged sixty-eight years.

THOMPSON.—In Kansas City, Missouri, on Monday, February 27th, Dr. Edward K. Thompson, aged forty-four years.

TIPTON.—In Roanoke, Virginia, on Monday, March 5th, Dr. Joseph A. Tipton, aged sixty-nine years.

TOWNSEND.—In New York, on Wednesday, March 7th, Dr. Charles W. Townsend, aged thirty-seven years.

New York Medical Journal

INCORPORATING THE

Philadelphia Medical Journal and The Medical News

A Weekly Review of Medicine

VOL. LXXXIII, No. 12.

NEW YORK, MARCH 24, 1906.

WHOLE No. 1425.

Original Communications.

AN EXPLANATION OF SUGGESTIONS IN THERAPEUTICS.*

By BROOKS F. BEEBE, M. D.,

CINCINNATI,

PROFESSOR OF MENTAL DISEASES, MEDICAL COLLEGE OF
OHIO; CHAIRMAN OF THE COUNCIL OF THE
OHIO STATE MEDICAL ASSOCIATION.

That power or mental action in one person which is capable of producing impressions in another, is known as psychic force, psychic influence, suggestion, hypnotism, mesmerism, etc. Of these various terms suggestion, at the present time, appears the most appropriate and the one most frequently used. The only rational explanation of this very important subject is to be found in the physical basis and functions of the nervous system. Physiological psychology alone gives the rationale. To the uninformed there is much that is mysterious in it; and, as has been the case since the world began, or rather since it has been inhabited by man, the mysterious, or unknown feature, has resulted, but too frequently in leading people to fly to a religious system of some sort for explanation. Hence the many "isms" and fads of the day.

That psychic influence has not been used more by physicians in a legitimate manner; that our profession has permitted it to become the basis of so many religious cults, and has allowed it to be used by charlatans to the detriment of the people and our profession, is certainly peculiar. Unquestionably every person has an influence, to a greater or less degree, upon some other person or persons. Unquestionably suggestion, or psychic influence, may be made to play an important rôle in the healing art. All physicians, consciously or unconsciously, do influence their patients in a general way, and in the curing of disease. More attention should be given to it.

It is the chief element in the treatment of disease by all the religious fads and "isms" of the day, which, unfortunately, seem to be on the increase from year to year. That some of the followers of these fads do relieve, symptomatically at least, some cases, is not questioned; but that their theories for the good which is done are correct is a matter of serious doubt. And I believe that it is high time science takes hold of this matter in a proper way.

* Paper read before the Ohio Councillor District Societies.

Permit me, at this point, to say that I do not purpose going outside my own field of psychology and psychiatry one particle in the discussion of the subject.

That a false belief in anything is harmful is axiomatic. The truth is what we should seek regardless of anything else. It can never be considered improper, much less blasphemous, to replace even a false religious doctrine by truth. That prayer, for example, if of proper kind, may do good is true. When a man prays or thinks good things, he becomes a better man than he who thinks bad things. There is a direct reflex action upon every one from his own thoughts, as we may see and explain. A prayer for special dispensation, as that a broken leg may get well in fifteen minutes, or that a man, in the delirium of typhoid fever, may be made to take up his bed and walk, as in perfect health, is nonsense and harmful.

Greater knowledge is what is needed in order that better discrimination may be made; and remember, please, that knowledge comes, directly or indirectly, only by experience—yours or some one else.

The great questions for us to discuss are: What is the nature of psychic influence? How is mind acted upon by mind? How does mind affect body? What is mind? And then, What is the rationale of suggestion in therapeutics? For, after all, this is the most important, the most practical feature for us as physicians.

In order that this subject may be more easily and thoroughly understood, it is found necessary to commence our investigation at the very beginning of things, as nearly as possible; and I wish to repeat that the true explanation is to be found only in the phenomena exhibited by the nervous system. I claim that this matter is very simple when rightly worked out and understood.

A phenomenon is defined as an appreciable expression of matter; and the matter that we now have to consider, chiefly and deeply, are the highly differentiated grey cells or little neurine batteries of the nervous system, in which is generated the energy that exhibits itself by mental or nerve phenomena. You are to remember that it is estimated there are from seven to fifteen hundred millions of these little grey cells in the average educated human brain; or ten to twenty times the population of the United States. What a wonderful little round world of energy is the human organ of thought and action! I will ask you to look at each cell as a person with feeling and knowledge and power to act; then will

you better appreciate that the consensus of opinion, so to speak, of all will in fact be the mental energy of the man as an entirety. Now then let us go back to our first knowledge of matter.

Inherent in all matter we recognize certain properties, depending upon certain laws of chemical constitution, the result of vitochemical union, such as brittleness of glass, elasticity of rubber, etc. Why matter is thus endowed no one pretends to know. We think we do well enough to know the properties of the various kinds of matter, in fact, that matter exists at all, if you please. Neither do we presume to know the original source of matter. Whence God or the creative power obtained the material out of which were made the millions of worlds in the universe, is one of the most incomprehensible of so called comprehensible things. Of necessity we are agnostic in respect to some things. That something can be made from nothing, we cannot conceive. That time and space never had a beginning and will never have an end is equally incomprehensible to finite minds. There is, however, a limit to scientific investigation, as also there is a beginning; and today our beginning is matter and its properties. From this knowledge we proceed to construct, to build, and by experience learn the capabilities of a human house.

The final analysis, as nearly as we can find out, lies in the simplest chemical unions; next in the more complex functions of the organisms. Therefore, given the atom and its properties, we construct the molecule, the cell, the tissue, the organ, and, finally the complete man. Then the question is, what is he capable of doing? How is he influenced and how and why does he act so and so? We say, given matter and its properties, that we proceed to a rational or physiological psychology.

Like many other facts in medicine, psychology has been quite unfortunate in that the term has been so long misunderstood; but this is true of the x ray and a thousand other things in medicine, so that we must work as best we may, with the knowledge that we have. Psychology defined as the science of the soul is a misnomer. Psychology is the science of mind, and mind is defined as the sum total of the phenomena arising from the myriads of grey cells of the nervous system. The barren heights of metaphysical speculation no longer have place in this discussion because psychology belongs to the physical sciences.

The word psychology comes, as doubtless some of you remember, from the Greek word *psyche*, meaning breath; "*psychein*," to blow. *Psyche*, breath, has direct reference to the breathing, as significant of life—a living, moving, breathing organism resulting.

Let us see how we begin *psychein*, to breathe. What really occurs at the birth of the new born babe? Have you ever thought of this from a scientific standpoint? In utero respiration takes place through the blood of the mother. When the cord is compressed or severed there is instantly an interruption of the blood circulation from mother to child. What takes place at this time? The child dies if not properly supplied with oxygen from another source. How is this done? What sets the respiratory apparatus in motion? The entrance of so called "spirit of life"? No! No! Has the soul

taken possession of its temporary abiding place and wants to see the wheels go round? No! No!

Look at the physiology of it for a moment. At birth, after cutting the cord, there immediately takes place in the system an accumulation of carbon dioxide. This carbonic acid gas acts upon the respiratory centre in the floor of the fourth ventricle, as is well understood; efferent nerve impulses are sent out to the respiratory muscles; they lift up and dilate the chest; the air rushes in of its own pressure, and thus has breathing been established. A new physical being has come into the world, has begun *psychein*—to blow, to breathe; and every step that has been taken is easily accounted for by natural laws. Nothing supernormal, much less supernatural, is required in explanation. Then what does histology, physiology, pathology, and biology teach as to the next steps? What about mental development? If at birth we should be deprived of our special sense mechanisms, seeing, hearing, smelling, tasting, and touching, we should remain as we were born, viz., idiots. As is well known, however, the usual development of brain takes place first at the five special sense centres, then these are connected, later, one with the other, and with different parts of the brain, by their respective paths of conduction, or communicating fibres, all of which develop with their necessity or experience, thus constituting the brain, a very complex whole, in which is represented every interest of the entire body.

In a general way we say that brain function, or brain activities, as a whole, may be considered under three general divisions, there being a sort of division of labor, as it were, among the millions of denizens of our mental sphere. The three general divisions are, first, the primary reflexes or those nerve actions governing involuntary movements, such as of the internal organs; second, voluntary muscular action, the acquired reflexes; third, the mental faculties of emotion, intellect, and volition; or, feeling, thought, and will power, the collective phenomena of which is called mind.

Remember that mental as well as motor activity is reflex. It is with this third division that we are specially concerned to-day. By a slow process of evolution over a period of time unknown to man the five special sense mechanisms have been developing, accomplished, doubtless, in obedience to the law that "the want or need generates the effort; and the effort, or exercise the faculty" (Lamarck). Which was the first, the oak or acorn? Each one comes from the other, does it not? We need not stop to discuss this at this point. For the present let it suffice to say that function and form go together.

Given our five special sense mechanisms, let us proceed to gather experiences, called sensations, which are the only source of knowledge, or means of mental development and growth, which knowledge alone enables us to place ourselves in the proper relation to our environment, that is to live. And if life is worth living at all it is certainly worthy of our best efforts to live it well, that is, to have the proper amount of knowledge that will enable us to harmonize our innumerable daily experiences and make them of the most practical value. First, what is a sensation? We say that a stimulus, irritating any sensory nerve terminal, causes nervous excitation, or sensation, which is, in fact, a physical or

chemical process in the nerve cells. No cell acts without vittochemical change. This excitation, now a sensation, follows a path of conduction, viz., one of the five special nerves, to a special sense centre in the cortex of the brain and when appreciated there by these psychic or conscious elements, becomes a perception. In the true sense, then, we have arrived at the beginning of consciousness; that is, every cell from the end terminals on, being in a state of irritability, varying in a degree according to the vittochemical constitution, really feels, knows, and acts.

Every cell in the body really feels, knows, and acts. It feels because it has irritability; it knows because it appreciates its own chemical changes, and, in consequence, reacts—the chemical changes having been initiated or superinduced by some outside or external stimuli. Identical is the process of reaction observed in seed germs. When the external stimuli of sunlight and heat are applied to them, new chemical reactions take place within them in consequence. Why this action and reaction, no one knows. We have simply gotten back again to the first principles, or the inherent properties of matter. "Thus far shalt thou go and no farther." At the beginning of consciousness, we are at the threshold of feeling, thinking and acting, or emotion, intellect, and volition of the entire organism, or man.

In each instance the sum total of the feelings and knowings and desires of all the cells, that make up this body, constitutes, respectively, the emotions, intellect, or volition of the man as an entirety. Just as we might say of a nation: It feels certain influences, internal or external to it; it is conscious of its wealth, power and general intelligence, for example; it acts as it sees fit. What is meant by this? That it, the nation, is a social organism, as is man, made up of many millions of units, each one of which is endowed as is the nation as a whole; and that the sum total of the conscious functions of these units is, in fact, the mind of the nation. So we define mind in man as the totality of his psychic or conscious functions.

Mind is not an entity, it is not a thing, it is not an integral part of the individual, and, therefore, we must be careful of the use of the article the in connection with the word mind. We simply define mental force or mind in the same way as we do any other forms of force, each as a group of phenomena. Hence the questions of materialism or spiritualism have no place in this discussion. We are simply speaking of functions and phenomena of matter.

First, then, sensation. When sensation arrives at the so called seat of consciousness, or brain centres, we call it perception; when perceived and registered, a memory image or idea. In other words, an idea is a picture hung in memory's hall, a negative, as photographers would call it, put away in the brain closet to be brought forth, and from it a copy taken at will. A print from the negative does not injure the plate, though possibly during the time of taking innumerable prints, the negative may be worn to dimness, as time dulls the memory of an old man. Just in proportion, now, as the physical constitution of the brain cell, or photographic plate, is in good condition, are the number of reprints, or ideas, of value, memory good, tone of the emotions healthy, and the volition proper.

We have now arrived at the point when we are able to define the character and conduct of an individual, appreciate their genesis, and prognosticate action. Character, we say, is the proper or accustomed balance between the three mental faculties of feeling, thinking, and acting—in other words, the ideal character, or person, or ego is one in whom are blended emotions of a desirable tone, associated with intellectual attainments of high degree and a volition or will power that truly expresses his entire psychic life.

The feelings, or emotional tone, of a man is an important element of his conduct and character. As is observed in the insane, unhappy emotions or feelings cause the unpleasant thoughts of fear, distrust, delusions of various kinds, complaints of self or others, etc. Feelings are converted into impulses and then into acts. A definite aim, or desire, forms the starting point and this, primarily, comes from the physical constitution of the cell. The tone of the feelings, i. e., the state of the emotions, may be likened, in a way, to the tone and timbre of a musical instrument since they vary, as does its construction or combination of physical elements of which it is composed. Myriad are the number of sensations that come to us each day. The number of things that we see, hear, smell, taste, and touch in a single day is beyond computation. Every one of them produces a feeling, or sense, of pleasure or pain, of well-being, or the reverse, of happiness, or discontent.

At the very moment of its reception by consciousness, every sensation is weighed, considered, compared, judged, classified, and pigeon-holed for future use. This is the intellectual process, and, to be of high order, must depend upon the number of sensations received and their proper disposition.

Since the vittochemical constitution of the millions of grey cells is the physical basis, and the sum total of their sense of feeling constitutes the emotion of the man, and that physical desire is the direct cause of impulse, it is not difficult to appreciate the direct connection between good and bad conduct and the normal and abnormal brain cells. "As we feel, we think, and as we think, we act," is an old truism. Emotional disturbances then are, in fact, the sum total of the physical or chemical commotions in the grey cells; and this *commotio cerebri* is great or little, according to the constitution of the cells and the influences affecting them. Thus every sensation of seeing, hearing, smelling, tasting, and touching becomes in fact a suggestion, and they act directly upon the brain cells producing the so called mental impressions.

In this way is the whole world swayed by psychic influence, by suggestion. It is well to remember that no one does voluntarily other than he desires, and that the dominant desire is ever the will power for the time being. It is a great lesson that one should be careful how he constitutes his desires; how he constitutes the physical basis of mind, viz., the nervous system. Involuntarily, and of necessity, do we respond to the dictates of physical desire. Be careful about forming your habits therefore. Free will, in the strict sense of the term, is nonsense. Determinism is the only rational conclusion. Our brains determine for us our every action. Be careful, I say, how you constitute the physical basis of mind, your brains.

The progress of mankind from a lower to higher feeling, thought, and action, has its basis exclusively in greater experience, thereby gaining greater knowledge (knowledge is but an appreciation of our relations to the external world), developing a deeper and truer feeling or appreciation of that relationship, and permitting our best or most consistent action. Pope was correct.

Know then thyself. Presume not God to scan.
The proper study of mankind is man.

408 BROADWAY.

THE SPIROCHÆTA PALLIDA IN SYPHILIS, WITH SPECIAL REFERENCE TO GOLDHORN'S RAPID STAINING METHOD.

By GEORGE M. MacKEE, M. D.,

NEW YORK,

ATTENDING PHYSICIAN TO THE DEPARTMENT OF DERMATOLOGY AT THE NEW YORK UNIVERSITY AND BELLEVUE HOSPITAL MEDICAL COLLEGE DISPENSARY.

In recent years the exhaustive search for the ætiological factor of syphilis has resulted in many interesting and instructive experiments. Before recording personal observations I think it will be interesting to review briefly the more recent investigations.

Metchnikoff and Roux, in 1903, proved absolutely that syphilis could be transmitted from man to the higher order of the ape. Previous to this many supposed cases of inoculation from man to monkeys, guinea pigs, cats, swine, etc., were recorded, but these lacked confirmation. The above mentioned investigators chose the anthropoid ape because of its close zoological relationship to man. They first inoculated a chimpanzee with serous fluid obtained from a chancre on the penis of a man. Twenty-six days later a typical chancre developed at the point of inoculation, which was followed in exactly one month by a papular syphilide on the back, abdomen, and thighs, accompanied by an adenitis. These papules began to fade, but were still visible two months later when the animal died of pneumonia. Another chimpanzee, after exhibiting the same lesions, showed a paraplegia which lasted over a month.

That the disease could be transmitted from one ape to another was proved by the inoculation of a healthy chimpanzee with the material from the syphilitic ape. This was followed by typical primary and secondary lesions. The same experiment applied to a monkey resulted in the development of a primary lesion, but this was not followed by the appearance of secondaries.

This resistance suggested the possibility of producing a protective vaccine by first passing the disease through lower animals before inoculating the chimpanzee. A chimpanzee was then inoculated with the virus taken from the syphilitic monkey, which resulted in a local reaction, but this was not followed by constitutional symptoms. This animal was apparently immune to human syphilitic virus.

Lassar and Neisser confirmed all the above, excepting the last mentioned experiment. They

have succeeded in transmitting syphilis from monkey to anthropoid, and suggest the possibility that the failure of the chimpanzee to react to human virus was from syphilization rather than from immunity.

Metchnikoff and Roux are still persisting in their efforts to obtain an immunizing vaccine. That very little success has been attained by their efforts is shown by their latest report, appearing in the *Annales de l'Institut Pasteur* of November 25, 1905. These studies, although extremely interesting, did not throw any important light upon the nature of the syphilitic virus.

Klingmüller and Baermann then tried diluting the virus with normal salt solution, and filtering it through a Berkefeld filter. They inoculated themselves with this filtered virus with negative results.

Metchnikoff and Roux continued these experiments, using the aqueous humor of a sheep's eye for diluting the virus, and taking every possible precaution as to temperature, contamination, etc.

A chimpanzee was then inoculated with the filtered virus, but failed to show specific lesions, while the control animal which was inoculated with the diluted virus before filtration developed typical primary and secondary symptoms.

These experiments at least proved that the ætiological factor of syphilis was a microorganism, and also that it was larger than other known germs, for instance, the microorganism causing the pleuropneumonia of cattle, which passes through this unglazed filter.

Further investigations showed that the syphilitic virus could be destroyed by heating to only 51° C. for one hour, or to 60° C. for one half hour. That the virus of syphilis has no great vitality after being exposed to the air, is well known from the relatively infrequent infections from improperly cleansed surgical, tonsorial and domestic articles.

As a result of these experiments, investigators devoted their attention to the discovery of the specific microorganism with renewed interest.

That this organism was not too specialized to grow on any but human soil was proven by the experiments on the monkeys. Yet the most persistent efforts failed to isolate the germ, or to demonstrate any corroborative microorganism in the blood, or in the primary or secondary lesions of syphilis, until Schaudinn and Hoffmann announced their discovery of a very delicate spiral organism having distinct morphological characteristics, and which was found in all the early syphilitic lesions they had examined. The exceedingly delicate structure of the organism, and also the fact that it stained very faintly, suggested the name of *spirochæta pallida*.

Previous to this important announcement there had been many claims to having found the specific microorganism, and much literature had appeared upon the subject, but these claims with but one exception had not been substantiated. Siegel demonstrated a supposed flagellate, the cytocytes luis, in the circulating blood, the renal tissue and in primary lesions of syphilitics, which could be followed through rabbits, guinea pigs, monkeys, etc.

This supposed protozoon is a small spherical, refractive and highly motile body. It appears in the blood a few days after inoculation, and becomes abundant after the twentieth day. It may be found in human blood a few days after the appearance of the chancre. These observations appear to have been confirmed, especially abroad.

Schaudinn and Hoffmann, in endeavoring to confirm and extend the work of Siegel, found instead of the cytocytes, an organism previously escaping attention on account of it being exceedingly refractory to the ordinary aniline dyes. They finally succeeded in staining it by using Giemsa's solution for from fourteen to twenty-four hours. They described it as being from five to ten micra long, possessing sharp regular curves, and having sharpened extremities.

Unless one has examined a specimen stained by this method, or one of its various modifications, it is impossible to appreciate the difficulties and the handicap these earlier investigators had to contend with. I have examined specimens stained by this method when it was necessary to look intently for several seconds directly at the organism before I could see it. Not only was the organism stained very faintly, but there was practically no contrast between the ground staining and the germ.

It is interesting to note the fact that a similar, if not the same microorganism, had been reported by Bordet and Gengou some time previous, as occurring in superficial syphilitic lesions, but as it could not be constantly demonstrated, they attached no importance to the discovery. Metchnikoff and Roux, however, evidently considered it important, as they were looking for this very organism when Schaudinn and Hoffmann announced their important findings.

Last spring, shortly after the above reports reached us, Dr. L. B. Goldhorn suggested the use of his stain to demonstrate the pallida. He thought that any strain based upon the principles of the Nocht-Romanowsky method, and forming an azur body, would stain this illusive organism. The first attempts being negative, he suggested a modification of the alkalinity of the stain. This was tried and found to give very satisfactory results.

Being anxious to stain the pallida with as little trouble and in as short a time as possible, he tried his one solution blood stain. This stain, when properly modified, gave such amazing results as to at once stamp it as the best and shortest method of staining this organism.

This stain, as are all the chromatin dyes based upon the Nocht-Romanowsky principles, depends for its action upon a nascent eosin azur formation.

The stain is prepared by dissolving one gramme of lithium carbonate in two hundred c.c. of water, to which two grammes of Merck's medicinal, Grubler's B. X., or Koch's rectified methylene blue is added.

This mixture is placed upon a double boiler and heated until a rich polychrome has formed. Care must be taken not to allow this process to proceed too far, as a useless thin, watery fluid with a lumpy residue may be the result. The

mixture is now filtered through cotton and allowed to cool.

To neutralize, one half of the fluid is slightly acidified with a five per cent. solution of acetic acid, and then added to the remaining alkaline half.

A one half per cent. solution of French eosin is slowly added until the filtrate from a filtered sample is of a pale blue color, with a slight fluorescence. The mixture after being allowed to stand for several hours is filtered through a double layer of heavy filter paper, and the precipitate allowed to dry at room temperature.

The dry precipitate is pulverized and dissolved in commercial wood alcohol, the commercial causing quicker fixation than the purified alcohol, and apparently has no deleterious effect. After standing for two days the solution should be filtered and the stain is then ready for use.

Although easily prepared, there is a certain technique required in making this dye not easily acquired by the amateur. In recognition of this fact Dr. Goldhorn has placed his stain upon the market. In obtaining this stain, one should ask for Goldhorn's stain for the *spirochæta pallida*, as the regular blood stain requires modification before producing the desired results.

The staining of the pallida by this method is so easily accomplished, and so positive in results, as to bring the finding of this organism within reach of any one having a microscope.

The technique I employ is as follows: Take, for instance, a mucous patch on the tongue or lip, with a sharp curette scrape the surface on the edge of the papule until a slight amount of serum appears, obtain the material by employing a platinum wire and smear upon a clean glass slide, or make an impression smear by touching the lesion with the slide. Allow the smear to dry spontaneously. Apply the stain to the unfixed smear by the use of a medicine dropper. After allowing it to cover the smear for four or five seconds, pour it off and slowly introduce the slide into a glass of clean water at room temperature. The slide should be introduced into the water in a slanting direction, and with the film slide down, to prevent any of the precipitate remaining on the preparation. Hold in this position for three or four seconds, and then gently wave through the water three or four times. The specimen should be dried either by shaking in the air, or by allowing it to stand on end for a few minutes.

It will be noticed that when the dye, which is blue, comes in contact with the water it turns purple, the active azur being formed. It is necessary that the slide be held stationary in the water for three or four seconds while this is acting. The entire process does not occupy more than fifteen or twenty seconds.

It is a very good idea before studying the pallida to familiarize oneself with other forms of the *spirochætæ*, which may be readily found in specimens of smegma, or from simple stomatitis. At first the apparent similarity between these organisms and the pallida will be confusing, but the eye will soon become trained to recognize the exceedingly delicate, sharp and regular curves of the pallida.

With this quick method of staining one is enabled to study many specimens in a short time, and as most workers are now using it, immediate and interesting results may be expected.

Dr. Goldhorn has confirmed the finding of the supposed flagellated pallida, demonstrating in several instances two distinct flagella on one organism. He has also demonstrated the supposed nuclei previously described by Schaudinn, Hoffmann, and other investigators. In several instances two nuclei could be seen in one organism. He has been able to demonstrate a membrane surrounding the refringens, but apparently the pallida has none. These facts are highly suggestive of the pallida being a protozoon rather than a bacterium which, if true, would explain the unsuccessful attempts at isolation and cultivation.

It is interesting to note that the number of pallida found in a specimen is in direct proportion to the infectiousness of the lesion from which the smear is made. For instance, very few pallida will be found in smears made from papules or macules, while smears made from chancres or mucous patches will show many organisms. In moist papules on the skin, probably the most infectious of syphilitic lesions, sometimes as many as twenty to thirty organisms will be found in one field of the microscope.

It is also very interesting to study the unstained organisms. Although very hard to find, a persistent search will usually reveal it by the following method: A hair is placed between a cover glass and a slide and the serum from a chancre allowed to be drawn in by capilarity. The organism is actively motile, the movements resembling those of a snake. It seems to move forward or backward with equal facility.

The recent flood of confirmatory reports of the finding of this organism in syphilitic lesions has been tremendous, and although there is ample room for doubt, yet the majority of authorities feel confident that the ætiological factor of syphilis has at last been found.

Almost all observers in this country have succeeded in finding the pallida, although as yet very little has been reported. Flexner, Ewing, Mewborn, Jagle, Fanoni, Taylor, and many others have succeeded in finding the organism. The only extensive studies so far reported have been applied only to superficial lesions. There is conclusive evidence that the pallida can always be found in these lesions, providing the case is positively one of syphilis.

While a few pallida can usually be found on the surface, they are much more numerous deeper in the lesions, and one is not so apt to find other varieties of spirochætæ. They are also very difficult to demonstrate when there is pus present. As Flexner points out, this is highly suggestive that the pallida thrives only on living tissue.

The blood has been studied by many investigators, but only in a few instances has the pallida been demonstrated, and then only in centrifuged specimens. It is possible that the contamination of the general circulation happens only occasionally and is accidental. Such a theory would account for Neisser's failure to inoculate monkeys

with syphilitic blood. (It may, however, be stated in this connection that since Neisser's report, Hoffmann has succeeded in inoculating monkeys with human blood.)

That the syphilitic virus probably spreads through the lymphatic circulation is shown not only by clinical symptoms, but by the fact that the pallida has been demonstrated in lymph nodes and in fluid aspirated from the spleen. That the pallida can be transmitted from mother to child has been demonstrated in several instances.

Although it is said that the spirochæta pallida has been found in lesions other than syphilitic, such reports lack confirmation. In fact, it is surprising that more such observations have not been reported, inasmuch as one must recognize the pallida from a morphological standpoint alone. In this connection it is interesting to note the report of Castellani, who states that he has found a spiral organism resembling the pallida in the superficial ulcerations of yaws.

In smears made from fifty patients presenting secondary lesions, Goldhorn has only failed to find the pallida in four cases. In the first case, that of a primary lesion, he failed to find the organism, but as this patient subsequently disappeared, making it impossible to confirm the diagnosis, no importance could be attached to the failure.

The second case was a girl with mouth lesions and a general macular eruption. Several smears were made from a mucous patch, but the pallida was not found. This patient also failed to appear the second time, so that further search could not be made.

The third case was a man with a healed chancre. This man is still under observation.

The fourth case was a female, thirty-six years of age, with a history of a primary lesion followed by secondaries one year ago, the present eruption being a tubercular syphilide. This case also failed to appear the second time.

In several cases the pallida was found only after a long search, and in other cases one lesion would be negative, while another in the same individual would be positive.

Before reporting my cases I would like to call attention to the accompanying photomicrographs presented by permission of Dr. Goldhorn.

Fig. 1 shows six spirochætæ pallidæ highly magnified. You will notice that the curves are sharp and regular. The length is of no importance, for it varies greatly. It is usually about the same as the diameter of a red blood corpuscles, but they are often several times this length. It will be noticed that one pallida is apparently split, while another is very thick at one end.

It is very probable that this organism undergoes a longitudinal division, and that the segmentation results in the formation of three or four pallida. After this division the young organisms appear to remain attached end to end for some time before a transverse division takes place. This last fact may account for the great length of some of the organisms.

At the last meeting of the Pathological Society of New York, Goldhorn presented several speci-

mens, showing this segmentation, and stated that he thought the pallida undergoes a longitudinal division. After an examination of the specimens, Dr. Ewing and Dr. Flexner were of the same opinion.

Fig. 2 shows other varieties of spirochætæ. A careful study will convince you that they are



FIG. 1, showing spirochæta pallida.

coarser, and that the curves are not as sharp and regular as are those of the pallida.

I wish also to call attention to the lack of precipitation, débris, and heavy ground staining which causes so much annoyance when other staining methods are used.

Under the microscope the picture is much more distinct than in the photomicrographs. The ground staining varies from a delicate pink to a bluish gray, depending upon the alkalinity of the smear, while the pallidæ are well contrasted by staining from a light to a dark purple. The pallida can be stained almost black by applying Lugal's or Gram's solution for ten to fifteen seconds after using the regular stain.

Since the 18th of December, 1905, every case of syphilis presenting itself at the dispensary is carefully examined for the pallida. A review of the history cards show eleven successful and one negative finding in secondary syphilis, as follows:

CASE I.—December 18, 1905. E. S., female, thirty-eight years of age, no history of primary infection. Patient presents papular syphilide on face, arms, and legs, and mucous patches on inner surface of lower lip. Pallida demonstrated in mucous patch.

CASE II.—January 9, 1906. A. E., female, twenty-one years of age. History of chancre followed by secondaries six months previous to this date. At present the patient has mucous patch on mucous surface of cheek near last molar tooth. Pallida demonstrated after persistent search in this patch. This patient had been taking mercurial treatment for several weeks.

CASE III.—January 9, 1906. M. L., female, twenty-four years of age. Chancre followed by secondary eruption in August, 1905. She presents ulceration of throat, mucous patches on lips and tongue, and exten-

sive alopecia. The pallidæ were found in a mucous patch.

CASE IV.—January 16, 1906. E. C., female, nineteen years of age. Chancre and secondaries in February, 1905. Presents mucous patches in mouth in which the pallidæ were found.

CASE V.—January 11, 1906. J. D., male. Chancre and secondaries in August, 1905. Presents mouth and throat lesions in which the pallidæ were found.

CASE VI.—January 11, 1906. M. H., male, thirty years of age. Chancre developed one month ago, the remains of which is still present. Patient presents general adenitis, maculopapular eruption, and mucous patches. The pallidæ were found in a mucous patch and in a papular lesion on the arm.

CASE VII.—January 18, 1906. S. B., female, twenty-seven years of age. Chancre two months ago. She presents fading macular eruption and condylomata of anus, in which were found the pallidæ.

CASE VIII.—January 20, 1906. P. B., male, twenty-eight years of age. Chancre one year ago. He presents patches in mouth and few scattered papules on body. The pallidæ were found in a mouth lesion.

CASE IX.—January 27, 1906. A. C., female, twenty-one years of age. Infected two years ago. She presents mucous patches on mouth and tongue in which were found the pallidæ.

CASE X.—January 27, 1906. W. M., male, twenty-seven years of age. Chancre two months ago. Patient presents mucous patches in mouth and maculopapular eruption on forehead, chest, and back. The pallidæ were found in the mouth lesions and also in a papule on the back.

CASE XI.—January 31, 1906. M. G., female, eighteen years of age. No history of infection. Papulomacular eruption all over body. The pallidæ were found in a moist papule on the breast.

CASE XII.—January 16, 1906. E. B., male, thirty-six years of age. Infected one year ago. Patient presents mucous patches in mouth and a papular eruption on arms and chest. This case was the only one in which we failed to demonstrate the pallidæ. As the

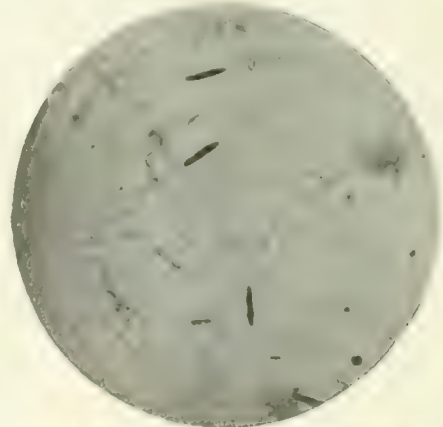


FIG. 2, showing other forms of spirochæta.

patient failed to return we had no further opportunity to study the case.

We have been unable to demonstrate the pallida in tertiary lesions, or in specimens taken from lesions in psoriasis, lichen planus, eczema, lupus, seborrhœic dermatitis, varicose ulcers, and epithelioma.

In private practice I have had only a few opportunities to study this subject since using this rapid method of staining, but have found no difficulty in finding the pallida in every suitable case.

CASE I.—January 4, 1906. M. C., female, twenty-six years of age. Prostitute, infected in July, 1905, presents mouth and throat lesions in which were found the pallidæ.

CASE II.—January 15, 1906. A. E., male, thirty years of age, primary lesion one year ago. Patient presents papular syphilide on legs and arms, in which the pallidæ were found.

CASE III.—January 23, 1906. B. A., male, presents a healed chancre, a diffuse macular eruption, mouth lesions, and a general adenitis. Pallidæ were found in a mucous patch, in the macular lesions of the scalp and body, but could not be demonstrated in the healed primary sore. Pallidæ could not be found in fluid aspirated from the inguinal glands.

CASE IV.—January 27, 1906. G. M., male, twenty-five years of age, presents indurated sore on penis which developed one week ago after an incubation period of two weeks. The pallidæ were found to be present in large numbers. The inguinal glands, which were enlarged, were aspirated on February 5th, but the pallidæ could not be found. This negative finding is, however, of no consequence, as there was considerable pus present.

Many of the above cases, both clinical and private, had received mercury for several weeks.

I have examined several tertiary syphilides, always with a negative result. In one case I curetted the lesion until serum was obtained. In another case I obtained the serum from a blister formed by the use of a cantharides plaster. I have repeatedly examined the blood, but have been unable to demonstrate the pallida.

Summary.—Syphilis can be transmitted from man to monkey, and from a monkey to another of its own species, or to those of a higher order. The susceptibility of animals is in direct proportion to their zoological relationship to man.

There is no proof as yet that the virus can be attenuated, or a protective vaccine produced by passing it through the lower animals.

Many investigators have laid claim to having found the ætiological factor of syphilis, but only two observations have been confirmed. The cytoryctes luis discovered and described by Siegel can usually be found in the circulating blood of syphilitics. It has also been followed through monkeys.

These investigations of Siegel have been confirmed and must not be lost sight of. It is quite possible that this supposed flagellate has some bearing upon the cause of syphilis. It is very probable that the spirochæta pallida is a protozoon, with a definite life cycle, and it is not beyond reason to think there might be some connection between the two. It is also possible that the cytoryctes will be shown to be a product of syphilitic degeneration.

The spirochæta pallida discovered by Schaudinn and Hoffmann has been found so persistently and has been confirmed so abundantly as to produce a feeling of confidence that it is the cause of syphilis. It is practically always found in primary and secondary lesions. It has been repeatedly demonstrated in the lymphatic glands, especially the glands draining the primary lesion. There is no conclusive evidence as to its being found in the blood. It has been repeatedly found in syphilitic infants. It has never been demonstrated in tertiary syphilis. There is no con-

firmatory evidence of its having been found in any disease but the one under consideration.

Monkeys can be inoculated with material known to contain the pallida, and typical syphilitic lesions will be produced. The pallida can then be demonstrated in these lesions.

The pallida has not as yet been isolated or cultivated, nor has it been possible to decide to what group of microorganism it belongs.

The greatest handicap in the study of this organism has been the lack of a rapid and satisfactory staining method. This want has been amply fulfilled by Dr. Goldhorn, and undoubtedly much that is now obscure and doubtful will soon be cleared up.

The most that can be said at the present writing is that we certainly appear to be on the right path.

119 WEST TWENTY-FIRST STREET.

TREATMENT OF LATERAL CURVATURE OF THE SPINE.*

By A. R. SHANDS, M. D.,

WASHINGTON, D. C.,

PROFESSOR OF ORTHOPAEDIC SURGERY IN THE MEDICAL DEPARTMENT OF THE GEORGE WASHINGTON UNIVERSITY, AND ALSO IN THE UNIVERSITY OF VERMONT.

There is no affection within the range of orthopaedic surgery, except, probably, that of congenital dislocation of the hip, that has given the orthopaedic surgeon more concern within the last few years than that of the treatment of lateral spinal curvature. As a result of the recent investigations along these lines a great deal has been added to our knowledge of this very important subject, yet one who is thrown in daily contact with this class of patients sees many severe cases that serve to remind him that a great deal yet remains to be ascertained concerning both the treatment and the unsolved problem of the cause of lateral spinal curvature. I say this advisedly, for there are but few cases that present a clear history of a definite cause; in fact it is the exception, rather than the rule, that we can assign a cause in any given case. The patients that I will show you this evening will bear me out in this assertion. They give a perfect bill of health, and are far better developed physically than the average girls of their age; I am utterly unable to assign any cause whatever for their curvatures. (See Fig. 1.)

As regards the treatment of these patients, we are very much like our brothers, the general surgeon and the gynecologist, in that, recent investigations have wrought many changes in our methods. Only eight years ago I read a paper before the Medical Society of the District of Columbia, in which I decried the mechanical treatment of these patients, except in the most severe ones, and then only for cosmetic effects. Years ago the only treatment given these patients was to apply a brace of some sort; later that method was found out to be wrong and was discarded for the gymnastic treatment. To-day the best men are using forcible corrective exercises combined with mechanical support. It is along these lines that I wish to call your attention in this

* Read before the Medical and Surgical Society of the District of Columbia, January 4, 1906.

paper this evening. In the light of my experience, and in the observation of the work of others, I am fully satisfied that a mechanical support is a most valuable adjunct to the gymnastic treatment in the severe cases.

When one has to examine one of these patients, he must be prepared to express an opinion as to the prognosis of the case, for he is surely going to be asked, "Will she grow out of it?" Before this can be intelligently answered, many things must be considered. If rotation and fixation of the vertebræ exist, the prognosis is extremely unfavorable; in such cases checking the progress of the distortion is as much as can be expected, but in cases where only lateral deviation of the spine exists, or complicated by rotation that can be corrected by extension, excellent results are often obtained when the treatment is properly carried out. In no case can it be said that a patient with a well marked lateral curvature will grow out of the deformity without treatment.



FIG. 1.—Two sisters, one year's difference in their ages.

Probably the prognosis is less favorable when the deformity is due to rickets than in any other class of cases. This should be readily appreciated when the numerous unfavorable circumstances incident to such cases are considered; the tender age of the patients, when the injurious effects of rickets are most active, precluding any thorough form of treatment and encouraging the rapid development of the deformity. I have under my care at present a child four years of age with one of the most severe cases of lateral curvature due to rickets. The distortion was noticed before the child was three years old. I am treating it with a solid plaster of Paris jacket, but must say that I am very doubtful about the ultimate result.

Curvatures caused by partial paralysis (anterior poliomyelitis) of the spinal muscles are very unfavorable.

In considering the clinical history of this affection it is a well recognized fact that the period of spontaneous arrest is at the cessation of growth; hence it is a matter of great importance concerning the age of the patient at the onset of the affection; it fol-

lows then that the later in childhood, the more favorable the prognosis under thorough treatment.

Sex is an important factor in the prognosis, as the deformity assumes much more severe and rapid form in girls than in boys, owing to their lack of muscular development and feeble health, often aggravated by disorders of menstruation. The deformity is much more common in girls than in boys; the numerous authorities that I have consulted state that it is about eight times more common in girls than in boys. This fact is the strongest argument of all to my mind in favor of gymnastic exercises



FIG. 2. Showing how much of the deformity the patient can voluntarily overcome by assuming the keynote position.

for these cases, especially when taken in their incipency.

The condition of the general health should always be taken into consideration as a very important factor. Persistent anæmia, chlorosis, disorders of menstruation, all of which are so often found in these poorly developed girls that are victims of lateral curvature, not only aid in the rapid development of the deformity, but prevent, to a great extent, an execution of an active course of treatment involving heavy muscular exercises. The most unfavorable subjects of all are girls in whom ill health is tinged with hysteria. Patients with long, yielding, narrow spines, that can be put into almost any shape, are very unfavorable subjects when the deformity once gets a start.

The site of the curvature is a matter of importance; those in the lumbar spine being much less favorable. Curvatures with long radii are much more amenable to treatment than those with short, for curvatures with short radii will very soon develop compensating curves, which adds to the complexity of the case. More attention should be given to the flexibility of the spine than to the amount of



FIG. 3.—Showing how much of the deformity can be overcome by suspension in the jury mast.

lateral deviation present; a curvature in which the deformity will disappear to a certain extent by suspension is favorable for treatment. When rotation exists, as is evidenced by the altered condition of the ribs and chest, the prognosis is nil as regards much improvement. A checking of the deformity here is as much as can be hoped for, and this by the most vigorous treatment. One cannot be too careful in noting the amount of rotation present before giving his opinion as to prognosis. The test should be thorough suspension of the patient to relieve the superincumbent weight, and to have the patient to assume the key note position (see Fig. 2); the latter position enables one to see how much of the deformity the patient can voluntarily overcome, as it will show very marked improvement if the vertebræ are not fixed in their distorted position. This is really a voluntary self extension; in spines with very well marked curvatures, where no rotation exists, almost as much improvement can be produced as by suspension with the Sayre jury-mast. This method can be taken not only as the key note to the condition of the spine, but as the key note to the treatment. How rational it should seem to one that if a patient can voluntarily overcome by the

muscular action of weak muscles a certain amount of the deformity, how much more should she overcome by developing the weak muscles that are responsible for her condition. If we consider for a moment what wonderful developments are accomplished by athletes, we should appreciate what should be expected by developing weak muscles.

The fact that spinal curvature is eight times more common in girls than in boys, is very significant that the lack of muscular development is by far the most important ætiological factor in this deformity. When one considers how different are the customs, amusements, games, etc., of a boy from those of the average girl, it is readily understood why there is such a difference in their muscular developments. The nearer a girl approaches a boy in her amusements, the more athletic her games will be, and the less likely she will be to have spinal curvature. My observation has almost led me to believe that spinal curvature is confined to city bred girls. I have never had a case of this trouble in a girl that has been reared in the country, for here they spend the most of their time out of doors; such children almost always adopt amusements of a most athletic nature, such as horse back riding, long walks, games

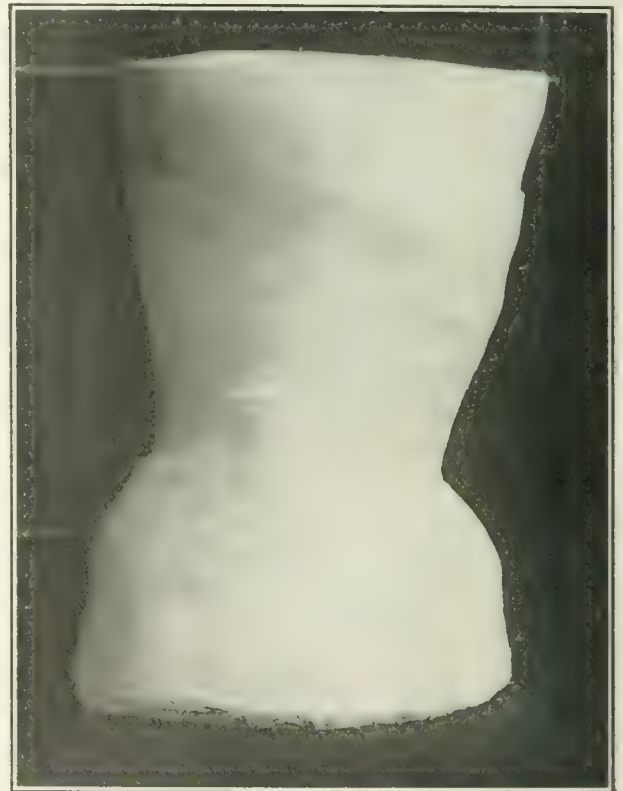


FIG. 4.—Showing where the plaster of Paris bust is to be cut away before making the corset.

of tennis, croquet, etc. In my native section of the country it is exceptional to see a girl that cannot row a boat, and I know of no form of exercise that is better calculated to exercise the spinal muscles than rowing with a pair of oars; in fact this form of exercise will develop every muscle in the body; the forced expansion of the lungs, necessitated in this exercise is a most excellent feature.

The treatment of lateral spinal curvature should

be regarded from two standpoints, viz.: preventive and curative. In recent years physical culture has been introduced into almost all of the schools as a part of their curriculum. This is a most commendable action on the part of the school authorities, for I am sure it will save many a girl from having a distorted spine, but at the same time a word of warning is necessary, for these exercises given by

to call your attention to a special treatment of the more severe cases. A great deal could be said concerning the preventive measures in which children should be instructed about faulty positions in sitting, writing, sleeping, etc., but, as I have said, that is not within the purpose of my paper.

The method that I pursue in treating these patients is practically that advocated by Dr. R. W. Lovett, of Boston, with a variation in the application of the mechanical support. To Dr. Lovett is due great credit for his original investigations along these lines. In my humble opinion he has done more to advance this important subject than any one else. I would advise every one who is interested in this subject to read his able and exhaustive article on the Forcible Correction of Lateral Curvature of the Spine, published in the *Boston Medical and Surgical Journal*, March 17th, 1904.

To put it concisely, his treatment is first to render the spine as flexible as possible, and then by a corrective force to overcome as much of the deformity



FIG. 5.—Posterior view of the corset.

a layman are capable of doing harm in cases of incipient curvatures. It is a mistake to trust such patients to the instruction of one who is not familiar with the anatomy of the spine for fear that the strong muscles will be developed to the injury of the weak ones; in such a case the second state of the patient will be worse than the first. Physical culture institutes are all right for normal spines, but not for the abnormal ones; in the latter case the treatment should be administered by one who is familiar with requirements of the case, for the treatment often has to be varied to suit the individual. It is a matter of greatest importance that these children should have their spines subjected to the closest inspection to detect incipient curves, for in the early recognition of these troubles rests our hope of curing them, or, at least, of preventing their further development. "As the twig is bent the tree is inclined," is surely a proverb applicable here.

It is not the purpose of this paper to deal with the treatment of lateral spinal curvature as a whole, but



FIG. 6.—Anterior view of the corset.

as possible, and to hold the spine in the improved position by means of a plaster of Paris jacket, renewing from time to time the jacket as the exercises, stretching and corrective force still further improve the deformity, believing that the retention in the corrected position should induce changes in the shape and relations of the misshapen bones.

In the paper I published on this subject, and to which I referred before, I stated that my method at

that time was to drill my patients in dumbbell exercises, stretching the spine over the end of a table (see Fig. 7) and by the means of the jury mast at my office, then to have them continue daily the treatment at home. The practice of trusting these patients to carry out the treatment caused a great disappointment to me in my results, hence I have long since abandoned the habit of trusting so much to them. I found that these girls would not carry out my instructions at home with any degree of reg-



FIG. 7.—Patient maintaining a horizontal position over the end of a table, which shows how the muscles of the spine have been developed by exercises.

ularity; they would allow all sorts of social engagements to interfere, and in that way they would very soon get out of the habit of doing it altogether. To derive the full benefit from the treatment, it must be carried out systematically, and continued for a long time. The length of time necessary will depend upon the age of the patient when the curvature begins. The spontaneous arrest of this affection corresponds to the time of the osseous development.

My present plan is to have these patients treated daily at my office by my office nurse, taking each patient separately and giving an hour to each one. Ordinarily the daily treatment is kept up for several months and then three times a week. The treatment consists of a combination of dumbbell exercises, stretching the spine in the jury mast (see Fig. 3) and hanging on a trapeze, bobbing up and down over the end of a table, and the application of an intermittent corrective force in the Adams machine. (See Fig. 8.) The patients are allowed to remain in this machine under the greatest amount of force they can stand for from fifteen to twenty minutes. It is very interesting to observe how flexible a rigid spine can be made under this treatment within a few weeks. After the spine has been rendered as flexible as possible, the next step is to suspend the patient in the jury mast and to take an impression of her body from the collar bone well over the hips. From the jacket thus made I make a bust of solid plaster of Paris. I then further improve the shape of the bust by shaving away a certain amount of the plaster over the apex of the deformity of both the primary and compensating curves until I have corrected it as much as I think necessary. (See Fig. 4.) Over this improved bust

I make the plaster of Paris corset that the patient is to wear. When the corset is laced on the patient you can bring as much constant pressure to bear at the seat of the deformity as the patient can bear. In this way I can put a constant corrective force on the distorted ribs which will induce a change in their shape. Since I have adopted this method of making my plaster corsets, I have had much more satisfactory results than I had when I made the corsets on the body. Another very great advantage is that you can make the corsets very much lighter, for this allows you to rub the separate layers of plaster together so much better, which makes the corset very much stronger, and not one half as thick as when made on the body. You cannot rub the plaster well together on the yielding surface of the body.

I cannot close this paper, although it is intended to call attention especially to the treatment of the worse cases, without a word about the early diagnosis and prompt treatment. My experience has been that I have not had a single case, in whom treatment was begun in the incipient stage and carried out faithfully, to develop a severe rotation with a prominent deformity. On the other hand I have seen several cases in the incipency that developed most distressing deformities that were treated otherwise than as I have described. It does seem reasonable then that, just as soon as the slightest deformity is detected, the treatment should be instituted to develop the weak muscles that are at fault, for you cannot possibly tell at so early a stage to what extent the deformity is going to develop. If it were



FIG. 8.—Patient in the Adams machine.

possible for this to be done in every case, there would be but few of the severe cases to develop, but unfortunately this will never be, for these cases are not often discovered until the deformity is well advanced. This is accounted for from the fact that it occurs at an age when the girls wear their clothes very loosely, consequently it is not discovered until the girls begin to have their dresses to fit a little more snugly. It is more often discovered by the dress-maker than by the mother, because of the fact that she cannot get the dress to fit symmetrically on the

two sides. These children are invariably brought to me with the statement that the mother has discovered that one hip is higher than the other.

In closing this paper I wish to report two cases of lateral spinal curvature that are under my care and I believe present a unique feature in that they are full sisters and one year's difference in their ages, being born on the same day of the month.

The patients are of the same weight and height, and are usually taken for twins. They both have severe rotary lateral curvature of the spine involving exactly the same vertebræ. The lateral deviation of the spine is about the same degree in each, but there is a slight difference in their rotation (see Fig. 1). The present ages of these girls are fourteen and fifteen. The spinal deformity was first discovered two years ago, and was well developed when the mother first discovered it. She tells me that she saw no difference in the two spines when she first noticed it. It is very evident that it developed about the same time in each. These girls have a perfect bill of health, neither of them ever having had a serious spell of illness in their lives. They are well developed physically and are much larger than the average girl of their ages.

I am at a perfect loss to assign any cause for the trouble in these girls. I have been able to obtain no facts in their personal history that coincide with the various causes assigned in the different authorities we have at our disposal. These girls have been under my care for the past eight months, and I am happy to say that their present condition is an improvement on what it was when they first came to me. They are the most faithful workers I have ever had in my gymnasium; they never miss a treatment, and always enter into the spirit of the work with enthusiasm. The heavy exercises do not seem to be work to them, but a pleasant sport. If I could always get the hearty cooperation of my patients as I do with these girls, I am sure my final results would be much more satisfactory.

901 SIXTEENTH STREET, N. W.

PERFORATING ULCERS OF THE DUODENUM, WITH CASE REPORT.*

By MAYNARD A. AUSTIN, M. D.,

ANDERSON, IND.

THE subject of duodenal ulcers has been given special attention during the past decade by such eminent men as Weir, Murphy, Moynihan of Leeds, Mayo and Mayo Robson.

Weir's article in the *Medical Record* in May, 1900, covered all the previous literature on the subject to that date. Murphy and Neff reported a case and reviewed the subject up to September, 1902, in the *New York Medical Journal*. Mayo reports six cases of perforation from his personal experience, in the *Annals of Surgery* for December, 1904. Moynihan, of Leeds, in his latest work on *Abdominal Operations*, reports seven cases in his own experience and eight others from the St. George Hospital reports.

Dr. Murphy's article embodies a monograph of forty-five pages, covering all points in connection with the disease as fully as the importance of the subject demands. Nothing in the articles subsequent to those of Weir and Murphy gives us any

* Presented to the surgical section of the Mississippi Valley Medical Association, at its meeting at Indianapolis, Ind.

special added features; my comments will therefore consist of a short review of what they have written.

The frequency of the disease is estimated at 0.2 of 1 per cent., or occurring with 1-12 the frequency of ulcers of the stomach. The age of the patients varies from a few days to 80 years, yet the age of predilection seems to be first from 30 to 40; second from 40 to 50, and third from 20 to 30 years of age. The sex most affected are males, in whom such ulcers occur a third more frequently than in women.

Contributory conditions having a bearing upon the case are based upon both toxic and biotic changes, such as accompany burns, nephritis, tuberculosis and those conditions that generally produce a condition of anæmia. Again it has been especially noticed that the majority of the patients are habitual drunkards, users of tobacco and inured to hard living. Lead poisoning has also been noted as contributory to the production of this condition.

The situation of the ulcers may be at any point in the duodenum, but the majority occur in the first part, and are found most frequently upon the anterior wall near the upper border.

The symptoms of duodenal ulcer prior to perforation are uncertain and inconstant, to which statement may be added the expression, there may be none. Dyspepsia, liver trouble, stomach complaint, billiousness, torpid liver, neuralgia of the stomach and indigestion cover the limits of symptoms to be investigated and differentiated, before symptomatic remedies should ever be prescribed.

In my short experience I have lavaged and obtained temporary relief only to have the case determine itself into cholelithiasis with gastric insufficiency. I have pepsinated and muriated other stomachs in cases that I have later recognized as reflex hepatic insufficiency with gallstones. I have had two cases of ulcer of the stomach come to me after being treated indefinitely for dyspepsia.

It is only too true that the average physician has an uncertain and vague idea of every other organ within the abdominal cavity, save the stomach, and the wrong treatment this organ has to undergo for its reflex sympathy in other conditions, makes one almost become a nihilist as regards medication of the stomach.

The classic symptoms of ulcer of the stomach and duodenum are pain, hæmorrhage and vomiting, yet any or all may be absent.

Pain when present prior to perforation occurs after eating and at a time when the food passes out of the stomach and over the eroded surface of the duodenum. Inasmuch as the average ulceration is situated upon the upper surface of the bowel, the food may pass out of the stomach and duodenum without becoming intimately in contact with the ulceration, a fact which accounts for the relative absence of this symptom. When pain is present in a degree to make one able to make a positive diagnosis before operation or perforation, we can be almost certain that the ulcer is situated on the under surface of the bowel.

The pain in an acute perforative case is deep seated, felt radiating upon both sides, especially deep in the right lumbar region. It is unusually severe and continuous and accompanied by a marked degree of shock shown by a subnormal temperature, rapid thready pulse and rapid respiration.

Tenderness may be elicited over the whole of the right side in the early stages, and is associated with a rigidity of the right rectus muscle to such an extent that the diagnosis of nearly every case of acute perforative duodenal ulcer has been a perforative appendicitis or cholecystitis. The symptoms of peritoneal involvement in duodenal ulceration are shown to be limited at first to the right side, whereas in gastric ulcer the perforation allows of an immediate general peritoneal infection.

The portion of the duodenum usually affected lies in a triangular space on the right side, whose centre is the centre of the triangle extending from the umbilicus to the ninth costo chondral junction, and thence along the lower margin of the ribs to the base of the ensiform cartilage. The first portion of the duodenum lies immediately below the centre of this triangle; the second portion forms a letter "G" whose posterior curve touches the lower and outer line of the triangle, and then curves towards the median line, ascending to a point beneath the pancreas at about the level of the tenth costo chondral junction.

Hæmorrhage may or may not be present, and is found in the stools oftener than in the vomitus. As in gastric ulcer the first hæmorrhage may be so severe that death may occur as the result in a few minutes.

Vomiting occurs as a reflex symptom, consequently is not common. Oppenheimer estimates its frequency as occurring in about 17 per cent. of all cases.

Gastric analysis has been found equally as uncertain in its results, different investigators having found the normal stomach content, subacidity, and hyperacidity.

The prognosis in these cases is dependent upon the early recognition of the seriousness of the case and immediate laparotomy. The various reports that I have investigated show a mortality of 85 per cent. The majority of the cases of recovery in cases of duodenal ulcer show them to have been operated upon for some other condition prior to perforation. The men who report a series of cases go at length into the surgical aspects of the cases, referring but casually to the diagnosis of the condition.

In Mayo's report of fifty-eight cases of ulcer of the duodenum, latent and perforative, twenty-eight were subjected to operation for symptoms referred to stomach, eleven for gallbladder and liver complications, thirteen for peritonitis and peritoneal adhesions. In but six of the cases was a perforation present, and in but one of the six cases was the perforation through bowel of recent involvement. The other five cases showed a perforation through an indurated base adherent to surrounding structures.

The history of my case is as follows:

At 1.30 a. m., July 25, 1905, a farmer, aged thirty-three, was brought to the hospital from his home in the country, 12 miles south of this city. I was called and arrived a half hour later, finding him in profound shock, with a temperature of 96°, pulse very feeble and flickering. He was given alcoholic and the usual external and hypodermic stimulation, so that he could give the following history:

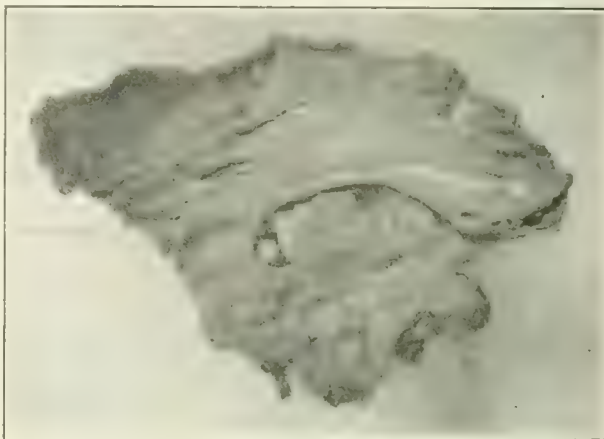
He said he had felt as good as common up to some

forty hours before reaching the hospital. (Later I found that he had been drinking very heavily for several weeks previous to my seeing him.) He said that he was returning from a stable where he had gone to look at a horse, when he felt a sudden attack of pain in his right side, that grew worse and had remained constantly with him, and about the only medicine he had taken was (more) whiskey.

When I examined him he said the pain extended into both sides of his back, worse on the right side, and of such a degree of severity that at times it appeared to be penetrating his backbone.

Examination of the abdomen showed a diffuse tenderness over its entire extent. The abdomen was not distended, but appeared retracted. The abdominal muscles were rigid on both sides, no excessive tenderness over either the appendix or gallbladder. No pain referred to the kidneys or down along the ureters. Abdominal auscultation showed intestinal paresis. There was no dulness in the flanks and no loss of liver dulness. He said his bowels and kidneys had not acted for twenty-four hours.

Exploratory operation could not be performed until his people could be reached in the morning, even if his



condition should improve. Ordering morphine and strychnine, hot rectal irrigations, and hot external applications, I left him until 6 o'clock. Returning in four hours after first seeing him, and having communicated with his people, I found his general condition much improved, the pain lessened, and the abdominal condition entirely changed. The abdomen was distended, the liver dulness was lost, and the normal depression under the ensiform cartilage was gone. The pulse was increased in rapidity and respiration was painful. There was dulness in the flanks. The patient had demanded and consumed a large quantity of water.

Returning to my office to secure assistance to operate upon the man without further delay, and while getting my things together, I was notified by the sisters at the hospital that the man had suddenly expired.

That afternoon I secured a post mortem examination, and found on making a median incision that the general peritonæum was filled with fluid and gas. On making a free incision from the sternum to pubes, I removed nearly two gallons of yellowish, fresh smelling fluid, such as would come from the stomach and duodenum. In the lower left quadrant of the abdomen was a well marked obstruction of the small intestine produced by a torsion, and the contiguous bowel showed as if the obstruction had been present a number of hours.

Following up the small intestine, fresh adhesions were found binding the cardiac end of the stomach and the duodenum to the liver and gallbladder. On pulling the duodenum slightly, its adhesions to the gallbladder separated and showed a typical ulcerative perforation

of the duodenum from which the fresh stomach contents escaped.

Removing the stomach and duodenum entire, and opening them along their upper border, I found the stomach practically normal, some mucus and evidences of a mild gastritis. About two inches below the pylorus and on the posterior surface and upper border of the duodenum was a perfectly clean punched out area of the gut wall. The serous surface showed a perforation $\frac{1}{16}$ of an inch in diameter, and on the mucous surface there was an erosion $\frac{1}{16}$ of an inch wide. There was no special induration around the ulcer and there were no signs of any accompanying ulcers in the stomach. There was no obstruction to the pylorus and no pathological changes in the gallbladder or bile ducts.

In this case we undoubtedly had that rare condition of an acute ulceration. This produced the pain, and the shock from it caused an adynamic ileus followed by a torsion. I am certain there was no perforation at the time I first saw this patient, and that it occurred sometime soon after I made my first examination, probably induced by the ingestion of considerable water into the stomach, and the natural distention from the accumulating gas back of the intestinal obstruction.

The following case reports of perforating duodenal ulcers are given in the *Annals of Surgery*:

A. B. Johnson, November, 1899. Diagnosed perforative appendicitis. Successfully operated upon nine hours after perforation.

Blake, October, 1902. Not diagnosed. Operation on second day. Successful laparotomy.

A. A. Stimson, November, 1899. Diagnosed appendicitis.

William Mayo, July, 1903. Three cases.

Moynihan, May, 1904. One case.

Mayo. Six cases, including above reports. December, 1904.

Willard, May, 1905. Chronic ulcer. Death.

The chief articles upon the subject that have been published in the last decade are as follows:

Weir. *Medical Record*, May, 1900. Comprehensive review.

Lospeyres. *Centralblatt für die Grenzgebiete der Medizin und Chirurgie*, March 18, 1902. Reviewing all the literature from 1891 to 1902.

Murphy. *New York Medical Journal*, September 27, 1902. Covering all the literature from 1900 to 1902.

Moynihan. *Lancet*, December 7, 1902.

Clery. *California State Journal*, November 19, 1902.

Berg. *Medical Record*, June 6, 1903.

Power. *British Medical Journal*, January 3, 1903.

Guibal. *Revue de chirurgie*, XXIV, 2.

Gibbon. *American Medicine*, December 19, 1903.

Moynihan. *Annals of Surgery*, May, 1904.

Mayo. *St. Paul Medical Journal*, February, 1904.

Allingham. *Lancet*, September 24, 1904.

Mayo. *Annals of Surgery*, December, 1904.

Power. *British Medical Journal*, December 17, 1904.

Clogg. *British Medical Journal*, January 21, 1905.

Moynihan-English. *St. George's Hospital Reports*, 1905.

359-361 UNION BUILDING.

THE DIAGNOSTIC SIGNIFICANCE OF COLIC.

By G. PAUL LA ROQUE, M. D.,

RICHMOND, VA.,

LECTURER AND BEDSIDE INSTRUCTOR IN SURGERY AT THE UNIVERSITY COLLEGE OF MEDICINE, ETC.

While in many patients most manifestations of abdominal pain are commonly termed colic, this term should be limited to designate spasmodic involuntary muscular contraction of the walls of an intraabdominal viscus or canal. Such spasm may be incident either to irritative or obstructive lesions, or to nervo-muscular incoordination. The commonest causes for such tetanoid contraction are found in the gastrointestinal tract, biliary and pancreatic passages, urinary apparatus and female generative organs. The most common irritative factors are inflammation or fermentation and their products, including gaseous distention. Foreign bodies, invagination, torsion and constriction from without are also causative. In lead poisoning, and certain other intoxications, the contractions are due to the effect on the nerves to the part. Local paralysis of a segment of a gut incident to embolism and strangulation or to a localized peritonitis, is also productive of incoordination; though this is represented typically by the crises of tabes.

Symptoms.—Certain symptoms are more or less common to all varieties of colic. The pain is paroxysmal, of sudden onset, gradually reaching a maximum intensity, and of a gripping character. It may be referred to the whole abdomen, with or without radiation to neighboring parts, and such radiation is of localizing value. The patient is generally "doubled up," and may assume any decubitus. Except in the presence of shock, genuine prostration does not occur, while restlessness is often marked. Shock, save in the extremes of age or the result of persistent agonizing pain in weak subjects, is not generally noted. When present, it is transient, disappearing entirely with the cessation of pain. Muscular rigidity when present is easily overcome. In lead colic it may be extreme. Cutaneous sensibility is exaggerated. Broad deep pressure and heat are generally grateful. Abdominal and diaphragmatic mobility are not affected. Vomiting generally occurs when irritation is severe. The relaxation incident to this act may be conducive to relief. Intestinal tympany may or may not be noted. It is rarely excessive save in intestinal obstruction.

Fever may exist as a coincident symptom. The temperature may be subnormal. The pulse is generally slightly hurried, though it may not be affected, and in lead colic and biliary obstruction the pulse rate is generally slowed.

Colicky paroxysms vary in duration from a few minutes to several hours, exhibit a marked tendency to recur, and as a rule the patient feels in every respect well, between attacks, save for a variable amount of "soreness" over the region affected. There are always additional symptoms referable to functional and anatomic alterations in the structure involved. Peristaltic action, distention, diarrhoea and constipation are to an extent localizing symptoms and will be referred to presently.

Gastrointestinal Colic.—Apart from the ordinary gripping pain incident to the administration of ca-

thartics, the causes of gastroenteric spasm include: Diffuse or localized inflammation, ulceration limited to the mucous or muscular coats of the canal, irritating food material and products of fermentation; visceroptosis, gaseous distention; foreign bodies; polypi or malignant growths; peritoneal adhesions; and all forms of intestinal obstruction. The enter-algia of plumbism, certain neuroses, many infectious fevers and tabetic crises are examples of neuro-genous colic.

Certain phenomena are of more or less value in aiding a diagnosis as to the nature and seat of the lesion. In affections involving principally the stomach, the pain is referred chiefly to the epigastrium. Colicky pain of small intestinal origin is often most severe in the region about the umbilicus. When the colon is the part involved hypogastric and lateral locations are conspicuous. In severe cases of any origin the pain is referred to the whole abdomen. Combined sources are common.

Diarrhœa generally indicates intestinal disease, though transient nervous diarrhœa and tabetic crises should be remembered. Except when associated with greatly exaggerated peristalsis or profuse watery secretion, the intensity of diarrhœa is greatest in diffuse colonic disease. With affections involving the upper part of the small intestine, diarrhœa may be inconspicuous or absent. Solitary ulceration or a single group of erosions located high in the colon may be accompanied by constipation. Puerperal peritonitis is often attended by diarrhœa.

The significance of frank intestinal or gastric hæmorrhage is obvious. Ulceration, cancer and cirrhosis of the liver are the most common causes. Erosions are attended by bloody vomit or mæna. The darker and more intimately mixed is the blood in the fæces, the higher its origin. Menstrual blood must not be mistaken for intestinal hæmorrhage. The colicky attacks noted in diseases characterized by erythematous skin lesions are often attended by bloody diarrhœa. Tarry stools point to high free bleeding. Persistent rectal tenesmus generally denotes irritation of the rectum or sigmoid and is often attended with blood in the stools. As a result of the intimate, indeed almost identical, nerve supply of the two structures, rectal and vesical tenesmus often coexist. Tabetic tenesmus is nonbloody, paroxysmal and transient.

The false diarrhœa incident to mechanical intestinal obstruction about the ileocaecal junction is scanty, mucoid, often bloody in character, with little fæcal matter and generally associated with tenesmus. It is most marked in intususception, though it often occurs with fæcal impaction, and in case the fæcal mass becomes channelled may be so pronounced as to be mistaken for true diarrhœa.

Constipation from all sources other than mechanical obstruction is attended by feeble or absent peristalsis, and except in plumbism and meningitis, by tympanitic distention. In the latter conditions the belly wall may be retracted.

A sudden substitution of diarrhœa by constipation suggests the onset of collateral peritonitis due to ulceration from within or to perforation.

The spasmodic vomiting of colic is expulsive, often violent, calling into play the abdominal muscles, and easily provoked by food. In general it may be said that the intensity of vomiting varies

directly with the height of the lesion and inversely with the severity of the diarrhœa. Large quantities of material are ejected from dilated distended stomachs. Except in intestinal obstruction, vomiting is never stercoraceous.

The pain of gastric ulceration is often diminished or entirely relieved by emptying the stomach of food and hydrochloric acid. This act is painful in all acute inflammatory affections of the upper abdomen and upon the onset of peritonitis, the movements of the stomach are inhibited and vomiting becomes easy and regurgitant in type. The colic of incomplete mechanical obstruction is sometimes diminished in severity by the relaxation incident to vomiting.

Hæmatemesis: The red blood and strongly acid vomitus of gastric ulcer and the coffee ground, water brash subacid vomitus of cancer and chronic gastritis are familiar. Purpura, scurvy and other blood dyscrasias, aneurysm and the portal congestion incident to cardiac, hepatic, splenic and pulmonary diseases are other causes of hæmatemesis. The effects of abdominal trauma, corrosive poisons, swallowed blood from epistaxis, fracture of the skull and in hysterical subjects and malingersers, as well as the occasional hæmatemesis indicative of vicarious menstruation, should be borne in mind. Hæmoptysis must not be mistaken for hæmatemesis.

Exaggerated peristalsis is manifested subjectively by griping pains and borborygmus. Through thin abdominal walls, especially in cases of intestinal obstruction, the waves of hyperperistalsis may often be seen and felt. Auscultation detects greatly exaggerated, rhythmical, rumbling sounds over the whole abdomen. Rarely the direction of the vermicular movements may be traced. The sounds due to peristalsis must not be mistaken for the gurgling incident to gravitation of intestinal contents from one loop of intestine to another, nor for the movements of respiration. While examining for absence of peristaltic movements, respiration should be temporarily inhibited and the abdomen should be bared. Aperistalsis is characteristic of general peritonitis. The movements are feeble in chronic plumbism and intestinal atony. Affections characterized by diarrhœa are attended with active peristaltic movements. In all forms of intestinal obstruction other than paralytic, peristalsis is greatly exaggerated above the seat of obstruction, diminished or absent below.

Lead Colic.—The enteric spasm incident to chronic plumbism often appears in the midst of apparently perfect health independently of diet and from no apparent cause. The pain is that of intestinal colic, the abdominal muscles are rigid, the bellies of the recti are prominent and the contour of the abdomen is flattened or scaphoid instead of distended. Concurrent spasm of extraabdominal voluntary muscles may be noted as cramp like pains in the calf or elsewhere. Vomiting may or may not occur. There is no fever and no leucocytosis. Granular, basic degeneration of the red corpuscles is always present though its demonstration necessitates a stained preparation. The pulse is slow and wiry. Other signs of plumbism generally exist though occasionally colic is the first symptom. The characteristic blue line on the gums or a peripheral neuritis may be noted. The history is often of value though the disease is not confined to lead workers. Paroxysms are strikingly recurrent.

The chief diagnostic features are: Constipation, flat or retracted rigid belly, associated cramps in other muscles, slow, wiry pulse and the absence of all signs of intraabdominal inflammation. Acute lead poisoning is characterized by the phenomena of diffuse toxic enteritis and will be mentioned in another article.

The colicky paroxysms noted as a manifestation of gout, uræmia, and certain other systemic diseases are doubtless the result of gastroenteritis incident to elimination of poisonous material, and will be discussed subsequently. The abdominal symptoms are often the first or only signs presented in some of these cases and must be carefully differentiated from surgical affections.

Tabetic Colic.—The paroxysmal spasmodic visceral crises incident to the incoordination characteristic of locomotor ataxia, while most commonly affecting the gastrointestinal canal, are not confined to these structures. Renal and ureteral colic, vesical and rectal tenesmus, bronchial and laryngeal crises are not uncommon, and biliary and uterine colic are not unheard of. The paroxysms when affecting intraabdominal structures are distinctly colicky in character, with certain distinguishing features.

There are no signs of inflammation in the structures involved. The vomitus and, when associated with diarrhœa, the stools are watery and free from mucus save as a coincidence. Bloody urine, mælæna, jaundice and the signs of inflammation or obstruction of the structures affected do not occur. Cardiac palpitation incident to impaired pneumogastric control is noted and this must not be mistaken for the feeble rapid running pulse of shocking colic nor of peritonitis.

The crises are noted in individuals of the age for tabes, and upon examination, other signs of the pre-ataxic stage of this disease are discoverable. The girdle sensation about the area involved is noted. A history of numbness, tingling and perverted sensation in the lower extremities may be elicited. Tabetic cramps or lightning pains may have occurred. Pupillary reaction to light is lost, while response to accommodation is retained (the Argyll Robertson pupil). Tabetic swaying is present, but necessitates the erect posture for its demonstration. The knee jerk may be enfeebled, but often the crises occur before this reflex is entirely lost.

Biliary Colic.—In addition to the characteristics common to colic of any origin, the localizing features referable to spasm of the biliary passages are as follows:

The pain generally begins and is most severe in the region of the gallbladder, from which it radiates along the course of the intercostal nerves to the right scapula and often the shoulder. Enlargement of the gallbladder may be detected before, during or after the paroxysms, and the signs of retention of bile should be sought. Icterus may be noted in the skin, mucous membranes and conjunctivæ, biliuria is apt to exist, and save when complicated by diffuse enteritis (a common association) constipation is present. Acholic fæces are foul, hard, dry and clay colored. Even in cases associated with diarrhœa, the fæcal material remains light in color. Abundant quantities of mucus in the fæces, and other signs of concurrent enteritis may be noted. Gastric catarrh is

almost invariably present and its signs are apt to persist even after subsidence of the paroxysm.

Affections of the biliary passages and liver, pancreatic disease and tumors of the duodenum are common causes of biliary colic. The traction of a movable kidney on the bile ducts through the duodenum may also cause occlusion and biliary colic in association with signs of the renal lesion. The differential diagnosis between enlarged gallbladder and other abdominal tumors will be discussed in a subsequent paper.

Pancreatic colic is not frequent. The pain is most severe in the epigastrium or back, may radiate to either or both sides and is generally of shocking intensity. Glycosuria may be noted. If the patient survives the causative lesion, the glycosuria may disappear. The accompanying indigestion is in no way limited to pancreatic disease. Excessive steatorrhœa and large quantities of meat fibres in the fæces are difficult to determine and not pathognomonic. The differentiation between pancreatic and biliary colic is exceedingly difficult, especially since pancreatic disease is generally causative of biliary obstruction.

Urinary Colic.—The distinguishing features of renal or ureteral colic are: The greatest severity and generally the beginning of the pain is over the region of the kidney, most often posteriorly, from which it radiates downward and anteriorly into the hypogastrium, scrotum and labia, and often into the thigh. Retraction of the testicle incident to cremasteric contraction is common. Vesical tenesmus is due to simultaneous spasm of the bladder. Oliguria or even anuria may be noted, with or without the formation of hydronephrosis. Hæmaturia (often microscopic) is generally present and often, upon subsidence of the attack, there is a copious flow of urine. Paroxysmal polyuria should never be overlooked. Gravel, calculi, blood, pus, and mucus should be sought in the urine. Renal mobility should be examined.

The colicky hypogastric pain caused by simple bladder distention in patients with urethral, prostatic or spinal disease must be recognized. This is a common cause of abdominal pain in fevers, characterized by the "typhoid state," and during pregnancy, labor and the puerperium. It may be a manifestation of hysteria or nymphomania. If distention is excessive, incontinence may be noted. Paralysis and rupture of the bladder may ensue.

Vesical tenesmus may be caused by irritative lesions of any part of the urinary apparatus or of the prostate and seminal vesicles. When of such origin it is generally attended by hæmaturia. It is often associated with rectal spasm (rectal tenesmus) and rarely represents a tabetic crisis, vesical epilepsy, hysteria or some other neurosis.

Uterine, tubal, and ovarian colic are commonly combined and often indistinguishable. The pain is low in the hypogastrium, may begin on either side or in the middle, radiates toward the back and often down the thighs. In cases of torsion of an ovarian cyst, ectopic gestation, and enormous tubal distention, the pain may be shocking in intensity. There are always signs referable to menstrual disturbances. Amenorrhœa, dysmenorrhœa, or metrorrhagia should be noted. Vaginal discharge may exist. Pelvic examination generally detects the cause.

Pregnancy, labor and miscarriage are common causes. When they are excluded the signs of inflammatory affections, malpositions, new growths, and cervical stenosis should be sought.

In every case of abdominal pain, the phenomena of colic must be immediately differentiated from those of peritonitis. The following table may be useful:

	Pain.	
	<i>Colic.</i>	<i>Peritonitis.</i>
	Less sudden onset.	More sudden onset.
	Gradually rising to maximum.	May be preceded by the pain of the primary lesion.
	Waxing and waning in intensity. Paroxysmal.	No spontaneous waning in intensity, persistently severe, often positively localized, and unless diffuse, there is always a point of greatest intensity.
	Less positively localized to a point of greatest intensity.	
	<i>Decubitus.</i>	
	Generally doubled up, patient may lie in any position. Restlessness is marked by frequent changes in position.	Thighs may be flexed, but no positive doubling up. Dorsal decubitus is generally assumed, and instinctively maintained.
	<i>Vomiting.</i>	
	May or may not occur, when present is expulsive in type.	Practically always occurs, and is of the easy type.
	<i>Bowels.</i>	
	Constipation only accidental except in intestinal obstruction and in plumbism.	Constipation marked though purgatives in large doses may be effective.
	Purgatives are effective except in obstruction.	Diarrhœa never present except in peritonitis arising from pelvic organs.
	Diarrhœa may be a part of symptom complex.	
	<i>Peristalsis.</i>	
	Normal or exaggerated.	Never exaggerated. Absent in the segment of gut involved, but in local peritonitis this is difficult to determine.
	<i>Tenderness.</i>	
	Cutaneous sensibility greatly exaggerated, broad, steady, deep pressure is grateful, though a vague deep seated tenderness of the causative lesion may be elicited.	Skin tenderness insignificant as compared with the fixed deep seated excruciating tenderness.
	<i>Muscular Rigidity.</i>	
	Never positive nor continuous except in plumbism or great distention. May be overcome by gentle, steady pressure, and is not confined to a small circumscribed area.	Always reflex and continuous. Not easily overcome by pressure. In localized disease may be circumscribed.
	<i>Diaphragmatic Mobility.</i>	
	Never impaired except by great distention.	Generally reflexly diminished, especially when the upper abdomen is involved. Sudden efforts, such as coughing and deep breathing, are painful.
	Movements are not generally causative of pain.	
	<i>Meteorism.</i>	
	May or may not occur, not characteristic except in obstruction.	Generally noted early, though in many cases slight, till disease becomes well marked.
	<i>Leucocytosis.</i>	
	Rarely present, and never progressive.	May not be present, but generally exists, and if progressive, is of diagnostic value.
	<i>Shock.</i>	

The significance of this will be discussed in a subsequent paper.

Fever.

May or may not exist. A sudden fever, especially if preceded by rigor, points to peritonitis, though its absence is perfectly compatible with this disease.

506 EAST GRACE STREET.

PROGNOSIS IN TUBERCULOSIS OF THE LUNGS.*

By JOSEPH WALSH, M. D.,

PHILADELPHIA.

Prognosis must be regarded from two points of view, namely, absolute and practical cure. Absolute cure considers the elimination of all tubercle bacilli from the body, the practical cure relates only to usefulness and signifies that the disease has been arrested and is capable of being held arrested while the individual pursues an useful occupation.

The tuberculous lesion cures by nature throwing a scar of connective tissue about the lesion, the connective tissue becoming thicker and thicker until we have nothing but a scar through and through. This requires for a lesion the size of a walnut at least two years, and for a lesion larger than a walnut a geometrically progressive time, so that it is scarcely likely that a lesion two inches in diameter will ever be absolutely cured. In regard to absolute cure, therefore, the most important element in the prognosis is that of involvement.

Prognosis as to usefulness is a very different thing, and is what we ought to consider in the prognosis of tuberculosis.

The primary factors in the prognosis of tuberculosis in regard to usefulness are the amount of involvement, the activity, the duration of the disease, the susceptibility to the toxine as manifested by rapid pulse, high temperature and loss of weight, the dissemination and the association of complications.

What might be called secondary factors, though in individual cases they become of prime importance, are: Age, sex, race, condition of life, intelligence, temperament, occupation or environment, and financial resources.

Among the primary factors the least important is probably the amount of involvement, unless this is so great as to interfere with the physiological action of the lungs.

The patient who, when first seen, manifests an involvement of only one or two inches at the top of the lung, may die if other symptoms are severe; while another with practically complete involvement of a whole lung may recover so as to lead a useful life for an indefinite number of years. Activity is usually manifested by moist râles about the lesion, and until they clear up, the prognosis should be somewhat guarded.

Duration of the Disease.—The length of time the disease has lasted has an important bearing on a case from a prognostic standpoint, and the history of the duration of the disease must be gone into carefully. Other things being equal, the longer the patient has had the disease, the more slowly it is evidently progressing and the

* Read before the Philadelphia County Medical Society, February 14, 1906.

more easily therefore it will be arrested. In other words, if a patient can without effort and while taking no special precautions hold his disease in check for a number of years, it is likely that with definite effort on his part and extraordinary precautions he can arrest the disease entirely.

It is not sufficient to take the patient's statement in regard to the duration of the disease, but the previous diseases must be studied, and even the physical examination must be taken into consideration. For instance, the man who has been of delicate build all his life will tell you he has been sick three months, though he had pleurisy three years ago, or has had walking typhoid every year for the last three years, or three years ago he had a cold that lasted for a whole year, or that five years ago he had hæmoptysis, etc.

In regard to the physical examination it is reasonably safe to say, if the patient has been feeling ill only several weeks, has been working up to within a comparatively short period and the physical examination shows a cavity, that the disease has lasted at least over a year. I do not know how short a time a cavity may excavate under acute conditions, but in a chronic case I think it perfectly safe to put the shortest time at one year. I personally doubt if it is ever worth while looking for the history of the contagion within six months of the finding of the lesion. It appears to me that the case would have to be extremely susceptible or be working in very bad surroundings to develop an evident lesion in six months.

We find that when a healthy man marries a tuberculous woman, or vice versa, he or she develops tuberculosis not within the year of marriage and usually not within two years, but from three to ten, or even more years later. It is not uncommon to find a consort developing symptoms five or ten years after the death of the mate. The statistics of the duration of tuberculosis have been gradually lengthening so that the average duration is, I believe, now between five and ten years. It is not uncommon to have a case come for the first examination with a perfect history of twenty years' duration without knowledge of the cause of the symptoms.

With an involvement either local or disseminated of any size, associated with marked toxic symptoms, as rapid pulse, high temperature, and either rapid or considerable loss of weight, the prognosis is bad, at least until the toxic activity is controlled, or susceptibility to it eradicated.

Acute miliary tuberculosis, even when limited to the lungs, is as a rule fatal, not on account of the involvement, but on account of the intoxication, death being due in the majority of these cases to the same cause that produces death in typhoid fever, diphtheria, or other intoxication. Even in acute miliary tuberculosis the prognosis becomes good if the patient conquers his susceptibility to the toxine, though such an occurrence is rare. In other words, no matter how small or how localized the involvement, a rapid loss of weight, high temperature and rapid pulse are bad prognostic features. These symptoms

also call for absolute rest in bed until the temperature and pulse rate become normal, and if this can be accomplished the prognosis becomes gradually favorable.

The reverse is also true, namely, the more normal the temperature, the more normal the pulse and the more normal the weight the better the prognosis.

One single finding of a reasonably high temperature does not make the prognosis bad, though it may make the prognosis guarded. By high temperature is meant a temperature over 101° or 102° every day for two or three weeks or longer.

The pulse rate elevated by the excitement of a physical examination may not indicate the true condition, yet even under these circumstances over 130 should make the prognosis guarded.

A loss of weight equal to one third the body weight is also bad. Underweight counts practically the same or even a little more than loss of weight. A man who had been thirty pounds under weight all his life does not stand so good a show as a man who has just lost thirty pounds. I remember several cases like the following:

Male, thirty-five, six feet tall, high weight 115, present weight 109, pulse 110, temperature in the afternoon 101° , with only a small lesion at the top of the right lung with slight activity. Yet in this particular case from experience with others I gave a bad prognosis merely on account of his marked under weight. He went to a private sanatorium, and though the utmost care was taken of him, the condition advanced and he died within six months.

Any one of these symptoms does not count for much, provided all the other symptoms are good, unless that symptom is extremely marked. For instance, a man may have complete involvement of one lung with all other symptoms good and recovery be possible; he may have lost over one third the body weight, yet the involvement being small and the temperature and pulse good, he may make a ready recovery.

I recall a woman whose high weight was 115 and who went down to 67 in weight, yet made a good recovery. She is the wife of an opulent farmer up the State and has had no symptoms in three years.

Sometimes many symptoms may be bad yet the involvement being small, recovery results.

I recall a patient, man of twenty-eight, who working in a bad environment came with a loss of forty-three pounds in weight, a respiration 36, pulse 140, temperature 100.4° and an involvement of both apices. He made a perfect recovery after two months in bed and six months of care and has now been working at his old trade for two years without a symptom.

Laryngeal tuberculosis has usually been considered of bad prognostic import for the reason that laryngeal tuberculosis is a rare primary condition and is commonly associated with considerable lung involvement. Primary laryngeal tuberculosis or laryngeal tuberculosis associated with affection of one apex is guardedly favorable but laryngeal tuberculosis associated with advanced tuberculosis of the lungs makes the prognosis very bad.

Intestinal tuberculosis makes the prognosis bad, though the diagnosis of intestinal tuberculosis is practically impossible to make with any degree of certainty. Diarrhoea and continuous pain in the abdomen associated with pulmonary tuberculosis make the diagnosis of intestinal

tuberculosis suspicious but by no means assure it. At the Phipps Institute we have found the following in relation to intestinal ulceration: Out of fifty-nine cases studied, the bowels were loose in twenty-six patients, of these fifteen showed intestinal ulceration; the bowels were constipated in twelve patients, of these three showed ulceration; the bowels were regular in twenty-one patients and of these five showed ulceration.

Tuberculosis of the lungs with a history of tuberculosis of the cervical glands in childhood makes the prognosis generally speaking favorable, because, unless the resistance is entirely exhausted, the chances are that since the patient recovered once he can recover again. Moreover, this shows the very protracted duration of the disease and thus improves the prognosis.

Tuberculosis of the lungs associated with fistula in ano makes the prognosis better, though for what reason we do not know. It has been claimed that the open sore allows the discharge of certain poisonous products which would be otherwise absorbed. Yet it does not seem to me that this explanation explains why fistula in ano has a good influence on tuberculosis of the lungs.

A previous or existing pleurisy also appears to make the case more chronic and therefore more hopeful in regard to usefulness. Pleurisy with effusion according to the seriousness of the effusion makes the prognosis worse until the effusion clears up. Peritonitis and meningitis are of course of bad prognostic import.

Complications.—The common complications are from the lungs themselves, the heart, the kidneys and the digestive tract. Any other disease of the lungs acts as a complication making the prognosis at least guarded. Even a cold does or is likely to increase the activity of the tuberculous process, and until cured it is not safe to give a favorable prognosis. Asthma, essential, cardiac, or renal makes the case less hopeful. Heart weakness associated with acceleration or swelling of the feet makes the prognosis unfavorable. A normal slowly acting heart (pulse under 72) improves an otherwise unfavorable prognosis. Albumin and casts in the urine usually make the prognosis unfavorable. A poor stomach in an irresolute individual is bad; in the majority of individuals, however, it can be remedied. The reverse is also true, a very good stomach decidedly improves the prognosis in any sort of a case.

In regard to the secondary factors we may take them in the order commonly followed in the history. Age has an influence in as much as the more acute the case, the worse the prognosis, acuteness is most common between the ages of 15 and 25. Children under 12 and adults past 40 are usually very amenable to treatment. Chlorotic or hectic looking boys and girls considerably under weight with an active outbreak of tuberculosis of the lungs about the age of puberty usually do badly. Comparatively few cases get their first infection after the age of 30, therefore the more past thirty the individual is the longer is the likely duration of the disease, in other words the more chronic and the more easily curable.

Moreover, age is of importance from another

point of view, namely, it is not uncommon to find the resistance to the disease exhausted at the same age in different members of the same family, for instance, we frequently see children of tuberculous parents perfectly well up to the age of eighteen or nineteen and at the age of twenty-two or twenty-three each in succession will die. I have seen four members of the same family die of tuberculosis between thirty-two and thirty-four, though the disease had been very probably acquired in infancy. In these cases it is important that they should be watched a year or two or even longer before this apparent age limit.

Race has some influence in as much as Hebrews as a rule have comparatively little or no susceptibility to the toxine, while the Irish as a rule show marked and negroes an intense susceptibility. Hebrews become infected practically the same as other people but on account of their insusceptibility to the poison they frequently manifest few or no clinical symptoms until the disease is well advanced. It is not uncommon to have a Hebrew come to the office complaining of comparatively slight symptoms and these over a very short period of time, yet showing to physical examination a well defined cavity at the top of each lung. Just the opposite is true of the negro. You may find him in bed seriously ill with a high temperature, rapid pulse, considerably emaciated from the effects of a lesion that is scarcely more than discoverable. For this reason Hebrews are very curable and negroes scarcely at all so. So far I have personally never seen a negro cured.

The condition of life whether married or single has an influence depending on circumstances. A young man without a family with a devoted wife will probably do better than if he were single. A married woman with a devoted husband and no children in the same way will probably do better than a single woman. Pregnancy and labor aggravate the condition and make the prognosis worse.

The intelligence of the patient is of considerable importance since it is possible to explain in exact terms the seriousness of the case and the necessity for continued care even after recovery so as to prevent relapse.

Temperament is also of importance since a happy contented disposition which does not worry and which makes the best of the existing circumstances is more favorable for cure than either a phlegmatic or pessimistic turn of mind. Moreover, the prognosis is better in a man of firm determination than in the flighty and irresolute.

Another important element in the prognosis is the environment in which the patient has been living. The better the environment in which he has been living, the worse the prognosis. Our only remedy for the prevention and cure of tuberculosis is a regular life with sufficient rest, fresh air, and good nourishment. If the patient has had these and his tuberculosis has developed in spite of them his susceptibility is so great that cure is not likely. If the patient has been living, however, under very bad circumstances, for instance, working in a sweat shop for ten or

twelve hours during the day, sleeping in confined quarters with others at night, and getting very little nourishment, his tuberculosis may have developed because of the bad conditions and his personal resistance may be found very good if he is put under proper conditions. It usually happens, however, that when such patients are cured they find it necessary for pecuniary reasons to return to the old environment and the chances of relapse are great. Consequently the worse the environment the better the prognosis as to recovery, though the greater the likelihood of eventual relapse.

An item that must be put in the prognosis by itself is the financial resources of the patient. If the pecuniary circumstances are so poor that, when a patient returns to work, he will be obliged to make his work continuous in spite of minor ailments like, for instance, a cold, he stands almost no chance of permanent recovery even as to usefulness. The following represents a typical case of a patient remaining cured despite an advanced condition:

Male, fifty-four, with cracked pot tympany from the top of the right lung to below the fourth rib, in other words a very large cavity with infiltration taking up the whole of the right upper lobe. I saw him first on March 16, 1903. He has been working since June 8, 1903, at carpentering on an average of ten hours a day with three exceptions, when he was off work from ten days to two weeks on account of a cold.

It is at least necessary that the patient have sufficient pecuniary backing to be able to drop work at any time that acute symptoms develop until these acute symptoms subside. If he has not the opportunity to do this there is no hope of permanent recovery. With good financial backing and the ambition to live, considerable can be done with even an advanced case.

632 PINE STREET.

AN UNUSUAL CASE OF CHLOROSIS.*

By JOSEPH H. BARACH, M. D.,

PITTSBURGH, PA.

CASE.—A. L. B., ten years age, born in Pennsylvania. Family history: His father and mother are living and well, he has one brother who is in fair health, there is no hereditary taint of any disease present in the family.

Personal history: Patient has escaped the ordinary diseases of childhood and until the age of two years he was to all appearances perfectly healthy. For several years after that his health was not so good, and during that time he was troubled much with constipation. Two years ago he had a severe attack of whooping cough, lasting two months. Following that he was taken sick with what was probably a bronchopneumonia. Otherwise his previous history is negative.

Present illness: When his present illness began is difficult to ascertain, as it must have come on gradually. But his condition has been as marked as it is at present for at least one year. The patient has always lived in the country, where he has had plenty of fresh air, good food, and proper hygiene. Ordinarily, he has but little appetite; breakfast seems to be his best meal. Not infrequently he overeats himself. At times his appetite is capricious. During the summer he is very fond of green apples, which have frequently

made him quite sick, and he always craves for sour stuffs, such as pickles, etc. Occasionally he shows other evidences of a capricious appetite. At times he is constipated. He is an emotional child, and at times in his sleep he is restless. On exertion in the open air his cheeks sometimes become quite red and of a natural tint, but he is apt to be taken with shortness of breath and not infrequently with palpitation of the heart, which may be accompanied with pain. Within the last month he has had two attacks of palpitation; with one of them he fainted. That one came on after a long street car ride, to which he is not accustomed, and the other came on without any apparent cause. I saw him in one of these attacks, his pulse was 100 and he had pain in the left chest, over the heart, the attack lasting but a few minutes.

Physical examination: Head. His facial expression is bright, mentality good, a slight stammering in his speech. He is a brunette, and has that peculiar greenish complexion which is quite characteristic. On examining his face more closely, you will see that there is an unequal distribution of the pigment, some areas being darker than others. Three of such areas are distinct upon his face, one beginning at the bridge of his nose, and going downward in the form of a triangle, includes the mouth, and another area on each cheek in front of the ear. These are most marked when looked upon in a partially subdued light. The eyes are bright and the sclerotics are of a distinct bluish tint. Since he has come under my observation, I have noticed that on some mornings the tissues beneath his eyes are swollen and puffed. There is a hydræmic œdema, and the tongue is pale. Neck. The jugulars are prominent, the glands negative, bruit cannot be heard over the jugulars. Chest. Examination of the lungs revealed nothing abnormal. Heart. No murmurs can be detected at any of the valve areas, and no evidences of hypoplasia or other abnormalities of the circulatory system can be determined. The heart sounds are distinct, pulse rate being normal. Apex impulse visible in its normal area. Abdomen. On inspection, the abdomen is somewhat larger than normal in proportion to the chest, but examination reveals nothing abnormal. The liver and spleen are not enlarged, nor tender to palpation and percussion. The extremities and glandular systems are negative. Patient's feet and hands never become swollen.

Examination of the blood on three successive days, January 8, 9, and 10, 1906, at exactly the same time on each day, showed a slight variation from one day to the other, and the average was: Red blood corpuscles, 6,124,000; white blood corpuscles, 8,500; and hæmoglobin, fifty-one per cent. A differential count showed polymorphonuclear cells, 57 per cent.; large mononuclear cells, 9 per cent.; small mononuclear cells, 29 per cent.; eosin, 5 per cent.; trans., 2 per cent. The proportion of the leucocytes is normal, and no peculiarities of any of these cells were to be noticed. The red cells, however, showed a moderate degree of poikilocytosis; no nucleated reds could be found in several smears. With the Stanton sphygmomanometer, 8 centimetre armlet, his systolic arterial pressure is 92.5 milligrammes.

Examination of the urine in twenty-four hours is 1025; the urine is amber in color, acid, and has a slight sediment. There is no albumin, nor sugar. The microscopical examination shows calcium oxalates. There is three per cent. urea.

This is a case of chlorosis. Chlorosis is not an uncommon disease; it occurs in females, especially in blondes between the ages of puberty and adolescence, but in a boy it is rarely found. In the ordinary case of chlorosis, such as is seen in young women, we usually find them plump, having an

* Read before the Allegheny County Medical Society, February 2, 1906.

abundance of subcutaneous fatty tissue; this is absent in this case. Von Noorden explains that this abundance of fat is due to the diminished exercise of these patients, and is independent of the oxygenation which is dependent upon a certain amount of hæmoglobin. This is proved very well, I think, in this case. The patient being a boy who is constantly at play whenever he can be out, and is thus preventing any marked deposition of unused fat. Whereas girls are more inclined to sedentary habits and manners of life.

Osler says that cases under 12 years are rare and that he has never seen a true case in a boy. Here is a case in a boy 10 years old, and a brunette.

The greatest factors in the causation of chlorosis as understood to-day, consist of the predisposition to the disease, hypoplasia of the circulatory system and generative organs, and defective absorption of iron. The predisposition to the disease consists of establishment of menstruation, changes in the nervous system, and bad hygiene. Not any of these are active in this case.

Hypoplasia of the circulatory and generative systems is the second factor. In this case, so far as can be determined by repeated examinations, no abnormalities of such nature exist.

We therefore have left for consideration only defective absorption of iron, or some cause heretofore unknown. Defective absorption of iron may be caused by improper food, or by improper assimilation from proper food. We can eliminate improper food in this case, knowing that the patient is given daily a proper choice of good food and that his brother two years younger than himself, who eats daily exactly the same food, is a perfectly healthy and strong boy. As to considering some previously unknown cause, there seems to be no distinct clue or suggestion of any kind by which one might follow along a certain line of research. In this case, therefore, everything points to defective absorption, the anorexia, sometimes bulimia, the capricious appetite for certain articles of food, and other gastrointestinal disturbances with which the patient at times suffers, all point toward the gastrointestinal tract as being at fault.

Agreeing that the gastrointestinal tract is at fault in this case we still have left for consideration the question: How is it at fault? As cause or effect of the disease? Is this faulty assimilation of iron due to improper gastrointestinal function, or is the gastrointestinal function disordered as a result of the small amount of hæmoglobin in the blood, consequent upon diseased function elsewhere? This question at present remains unanswered, the pathological physiology of the disease not being understood.

The treatment outlined for the case is simple. Change of surroundings, the boy always having lived in the country is now living here in the city. He is not attending school, and is encouraged to be out of doors. His diet now contains more nitrogenous foods than before. For the constipation, aromatic elixir of cascara sagrada; should there be intestinal fermentation, he would be given salol. With that general treatment he gets of (Blaud's pills made freshly) ferrous carbonate, 0.48 gramme three times a day, after meals.

He has been under this treatment since January 10th, at that time his hæmoglobin was 51 per cent., to-day

it is 68 per cent., while the red blood corpuscles are 6,240,000 and the white blood corpuscles 7,500. He has gained four pounds in weight, his appetite, his color, and general appearance are much improved. It will be noted that in twenty-three days the hæmoglobin increased seventeen per cent. This is quite characteristic, the hæmoglobin increases about ten per cent. every ten days in cases that respond well to treatment.

References:

Sahli—*Diagnostic Methods.*

Osler—*Practice of Medicine.*

Ewing—*Clinical Pathology of Blood.*
4502 FIFTH AVENUE.

SOME EYE PROBLEMS WHICH THE GENERAL PRACTITIONER IS CALLED UPON TO SOLVE.*

By RICHARD J. TIVNEN, M. D.,

CHICAGO,

ASSISTANT SURGEON, ILLINOIS CHARITABLE EYE AND EAR INFIRMARY.

Ophthalmology, of all branches of medicine, has received the almost unanimous consent of the medical profession to exist as a distinct specialty. This well recognized separation may often distract the general practitioner from exhibiting a keen interest in the study of ocular phenomena, and may prejudice also his desire to bestow the same relative consideration on ocular findings as he readily grants clinical manifestations of other organs of the body. For two reasons, at least, this condition of affairs should not exist. First, because the general practitioner is called to diagnose the eye disease, in the vast majority of cases, before the oculist is consulted; second, because in passing lightly over the evidence obtainable from the eye, clinical data of distinct value may be underestimated or entirely ignored.

A brief reference to some ocular manifestations occurring in nephritis, diabetes, locomotor ataxia, syphilis and rheumatism will demonstrate the importance of attention to eye findings.

It is my intention merely to direct attention to the frequency of ocular involvement in these diseases, in order to emphasize their diagnostic and prognostic value in connection with the disease itself.

Nephritis.—Many ocular changes occur in nephritis, but involvement of the retina, in particular, presents evidence at once reliable and conclusive. Norris estimates that fully twenty-five per cent. of the cases of Bright's disease have a retinitis. When it is present, the element of prognosis is greatly simplified. Few patients survive longer than two years after it is discovered and the majority die within a year. Belt records 419 patients of whom seventy-two per cent. died within one year and ninety per cent. within two.

Diabetes.—In diabetes, iritis is found in five to six per cent. of cases; retinitis in twenty to thirty-six per cent.; cataract in four to twenty-five per cent. When diabetic retinitis develops, the prognosis is exceedingly grave.

Locomotor Ataxia.—In locomotor ataxia, atrophy of the optic nerve occurs in about twenty per cent. of cases. It may antedate the appearance of ataxia, the lightning pains, loss of knee jerk, and other

* Read at meeting of Illinois State Medical Society.

spinal symptoms from 2 to 20 years. Disorders of ocular muscles are present in twenty to thirty-eight per cent. of cases; Argyll Robertson pupil in seventy-six per cent.

Syphilis.—Alexander from a study of the statistics of eight German ophthalmological clinics estimated that two and sixteen-hundredths per cent. of diseases of the eye are the result of syphilis. Thirty to sixty per cent. of the cases of iritis are due to syphilis and fifty-nine and four-tenths per cent. of ocular muscle paralysis. In congenital syphilis, interstitial or parenchymatous keratitis occurs in fifty per cent. of cases.

Rheumatism.—Rheumatism is the ætiological factor in the majority of iritis cases not caused by syphilis.

This brief reference is sufficient to demonstrate the startling frequency of ocular involvement in general disease and the distinct value of such evidence from a diagnostic and prognostic standpoint. Loring's estimate of the value of the ophthalmoscope in this connection bears repeating: "In the whole history of medicine," he writes, "there is no more beautiful episode than the invention of the ophthalmoscope and physiology has few greater triumphs. With it, it is like walking into nature's laboratory and seeing the infinite in action. While oftentimes, through its agency also, we get the first intimation of disease in remote and seemingly unconnected organs, so as to read, as if in a book, the written troubles of the brain, the heart, the spleen, the kidney, and the spine."

Foreign Bodies in the Cornea.—The management of foreign bodies in the cornea, while apparently a simple matter, is one of the most fruitful sources of serious disease of the eye. The chief danger arising from such an injury is infection. This may come from the foreign body itself or be introduced during its removal. The production of an ulcer with its grave consequences entailing either opacities of the cornea or perforation is the usual result of such an infection. Strictly antiseptic measures are indicated in removing foreign bodies. In order that the least amount of corneal tissue be disturbed, only the smallest pointed instrument is used. This is wiped with a pledget of cotton saturated with alcohol or, better still, dipped for a moment in a solution of carbolic acid and wiped thoroughly dry before using. After removal of the body, the cornea is gently irrigated with 1-5000 corrosive sublimate solution. It is an excellent practice to apply a bandage for twenty-four hours.

Differential Diagnosis; Iritis, Conjunctivitis, Scleritis.—Because iritis, conjunctivitis, and scleritis all cause redness of the white of the eye, they are sometimes confused in diagnosis. In iritis, there is no discharge; in conjunctivitis, the eyelids are gummed together in the morning. In iritis, there is circumcorneal injection giving rise to a pink or pale violet zone around the cornea. The appearance of the iris, however, is the decisive test. The iris, in iritis, loses its normal lustre, its circular outline, and the pupil is contracted. If a drop of cocaine be instilled, the pupil dilates irregularly, due to the adhesion of the posterior surface of the iris to anterior capsule of the lens. In scleritis, the characteristic appearance of the purple rather than red spot close to margin of cornea, and exclusion of the symptoms

common to iritis and conjunctivitis, will easily distinguish this disease.

Glaucoma.—Cases of glaucoma are not uncommonly treated for sick headache, neuralgia, erysipelas, influenza and toothache. Associated with glaucoma is usually found rapid failure of vision; a shallow anterior chamber; dull cornea; semi-dilated pupil, and, most important of all, increased tension of the eyeball. In all cases of suspected neuralgia, the tension should always be carefully taken. It is the one symptom of glaucoma which establishes beyond question its diagnosis.

Cocaine.—The chief use of cocaine in eye practice is as a local anæsthetic in operations and for diagnostic purposes to demonstrate the presence of adhesion or iritis. Its use is not entirely free from danger. Absorption through the puncta may occur, producing toxic symptoms. A transient amblyopia has been reported and glaucoma has been produced. Dryness of the cornea sometimes occurs from its use in operations and a variety of catarrhal conjunctivitis has been described. In instilling cocaine, to avoid absorption through the puncta and entrance to the nasal cavity, either the lower lid should be everted or the puncta closed by pressure of finger.

Atropine.—Atropine is one of the most, if not the most, important therapeutical agents of the ophthalmologist. Improperly used, it may produce blindness; judiciously employed, its visual triumphs are legion. It is indicated in correcting errors of refraction; spasm of accommodation; treating convergent strabismus; diagnosing and breaking up adhesions in iritis; ulcers of the cornea; and inflammatory conditions, iritis, cyclitis, choroiditis, retinitis, scleritis, and circular iridodialysis. It is contraindicated during lactation and pregnancy; in glaucoma, in subjects over forty years of age, or cases showing tendency to increase of tension, and in ulcers of the cornea with impending perforations. As with cocaine, toxic symptoms may result from absorption through the puncta, and the same precautions in instilling should be observed, viz., either everting lower lid, or closing the puncta by pressure with the finger. Glaucoma, or tendency to increased tension, should be absolutely excluded before atropine is used. A safe rule is, Always try the tension before instilling. Many exhibit intolerance to the drug, and therefore weak solution should be preferred.

Treatment Advised for Cross-eyed Children.—What treatment is to be advised for cross-eyed children? Perhaps no question presses the family physician for solution more frequently than this. It might truthfully also be said, that no question has in the past, and to a less extent even the present, been surrounded by a greater haze of prejudice, darker clouds of empiricism and cobwebs of fear and dread. Fanciful tales of the dire consequences following the use of that alleged popular sight destroyer, belladonna; exaggerated myths of the sad results following operations to straighten cross-eyes; staunch, but sadly misdirected, reliance in nature to aid the victim to outgrow the affliction, and strong popular prejudice against the use of glasses, have been and are individually and collectively responsible for the loss of sight in an amazing number of cases. The poor eyesight of these unfortunates imposes a distinct restriction of opportunities for successful careers. Likewise, the uncharitable comment and

critical notice to which their affliction subjects them is undoubtedly the cause of many heartaches, sorrows, and failures in life.

The family physician and the oculist are to-day in accord on the proposition that the time to treat a squint is when it is discovered, and that the earlier the case comes under treatment, the more hopeful the prognosis.

There are two chief reasons for treating a squint early: First and most important, to preserve and improve the vision in the squinting eye; and second, for cosmetic reasons. The treatment resolves itself into nonsurgical and surgical. The province of my paper permits merely an outline of the usual procedures. The nonsurgical are: 1, The correction of refractive errors, and 2, training of fusion sense, by occlusion bandage, atropine, use of stereoscope, amblyoscope, and other visual exercises. The surgical measures comprise advancements and tenotomies, single or combined.

Errors of refraction underlie the majority of squint cases in children, and the proper fitting of glasses, which are not only usually well tolerated, but enjoyed by children as young as two and one-half years, give surprising results and often render resort to surgical measures unnecessary.

To recapitulate—

1. Ocular findings are of distinct diagnostic and prognostic value in systemic diseases. The clinical ocular manifestations observed in nephritis, diabetes, locomotor ataxia, syphilis, and rheumatism amply warrant this conclusion.

2. Foreign bodies in the cornea are frequently the source of serious disease of the eye. Infection may be introduced and ulcer, with its grave consequences, develop. Antiseptic measures, in their removal, are to be strictly observed.

3. Iritis, conjunctivitis, and scleritis may be confused in diagnosis. Care in distinguishing the distinct clinical manifestations of each will prevent the error.

4. Glaucoma may be diagnosed as sick headache, persistent neuralgia, erysipelas, influenza, or toothache. In all such cases the tension of the eyeball is the correct guide.

5. The use of cocaine and atropine is not free from danger. Toxic symptoms may be produced. Contraindications for use of atropine are distinct, and tension should previously be estimated.

6. Squint in children should be treated early. The usual order of treatment followed is: A. Correction of refractive errors. B. Training of fusion sense. C. Surgical measures. Errors of refraction underlie the majority of cases and proper fitting of glasses may be all that is required.

100 STATE STREET.

VINCENT'S ANGINA.*

By L. T. ROYSTER, M. D.,

NORFOLK, VA.

The angina of Vincent was first described ten years or more ago and for some years thereafter it was looked upon as exceedingly rare, for until quite recently comparatively few cases had been observed. At present the literature is abundant and a large number of cases have been reported. I shall not

* Reported before the Medical Society of Virginia at its Norfolk, Va., session, October 24, 25, 26, 27, 1905.

discuss the ulcers, but refer to the recent article by Berkeley in the *Medical News* of May 27, 1905, and my own article in *Archives of Pediatrics* for August, 1903, concerning the bacillus.

Since the contagiousness of the angina is still a matter of discussion I report the following cases in support of the affirmative view:

In March, 1905, a local dentist referred a case to me which had been sent to him by a physician as a case of Riggs's disease. The ulceration in this case had been progressing steadily for some weeks and the patient was of the opinion that he had been salivated by a dose of calomel. He had always been healthy and there was no history of any taint. On examination I found the margin of the gums, upper and lower, in a wretched state of slough; the ulceration extending to the buccal mucous membrane and side of the tongue and even across the roof of the mouth. One tonsil had an ulcer sufficiently large to put the end of the thumb in, while the other had a similar but much smaller ulcer. The edges of the ulceration bled easily and the slough was removed without difficulty, leaving a bleeding surface. The mouth was sore and tender, the submaxillary glands enlarged and hard, and swallowing was painful. At the time he came under my notice there was no febrile disturbance. Smears made from the tonsils, gums and other surfaces contained large numbers of Vincent's bacilli and spirilli. The mouth recovered perfectly within a week under daily administration of tincture of iodine.

CASE II.—About six days after the patient's first visit to the dentist this gentleman (the dentist) came to me complaining of slight sore throat. On inspection I found a thin grayish pellicle on the left tonsil. Swallowing was slightly painful and the glands of the affected side were enlarged. I made a smear from the tonsil and found a few Vincent's bacilli but no spirilla. This was on Saturday and I did not observe the throat again until Monday at which time the ulceration was pronounced and contained both bacilli and spirilli in large numbers. By the end of the week this had healed under the application of tincture of iodine.

The Evolution of a Health Conscience.—Dr. Clouston pleads powerfully in the *Spectator* for the fostering of a health conscience in the community. He recognizes that the evolution of the moral sense in this new direction has already begun. "A deep feeling of duty," he says, "is arising in regard to health. A conviction of health sin is growing, and a yearning for health righteousness is setting in. We all know that most things only get well done when a sense of duty comes in. Conscience is the great monitor against neglected duty. A health conscience is being created, which, if it strengthens, will certainly do great things for humanity." He adds, "The city degeneracy problem, the house problem, the nurture of children problem, the heredity problem, and the marriage of the unfit problem, shall be regarded as moral questions for the solution of which a deep responsibility is laid on each of us." All this is true, but human nature being what it is, it is not likely that altruism will become a general law of human action. Nevertheless, the awakening of the public conscience in regard to such matters will not be hindered by recognition of the fact that in this, as in other directions, the evolution of the moral sense makes directly for the personal good of each one among us as well as for that of the community. It is the interest of the dwellers in the palace that fever should be stamped out in the cottage. If people can be got to realize that the performance of their sanitary duty to their neighbors and to the public is the surest safeguard to themselves, the evolution of the health conscience will be hastened.—*The Practitioner*.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at frequent intervals. So far as they have been decided upon, the further questions are as follows:

XLVII.—How do you treat whooping cough? (Closed February 15, 1906.)

XLVIII.—How do you treat pruritus ani? (Closed March 15, 1906.)

XLIX.—How do you treat lumbago? (Answers due not later than April 16, 1906.)

Whoever answers one of these questions in the manner most satisfactory to the editors and their advisors will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but not required) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLVI has been awarded to Dr. James Porter Fiske, of New York, whose article appeared on page 401.

PRIZE QUESTION NO. XLVI.

THE TREATMENT OF SPRAINED ANKLE.

(Concluded from page 561.)

Dr. Henry B. Hemenway, of Evanston, Ill., states:

In an ordinary case of sprained ankle, absolute rest for from three to five days, followed by motion, active and passive, seldom fails to give good results. During the first and second days, pedilavia as hot as can be borne relieve the pain and reduce the inflammation. Between the pedilavia it is well to have the foot bandaged, applying at the same time such a mixture as the following, which, besides having a direct beneficial effect upon the injury, relieves the mind of the patient and assists in causing him to obey other instructions:

R Tinct. opii,f3ss;
Tinct. arnicæ,f3i;
Ext. hamamelis dist.,.....q. s. ad f3vi.
M. S.: Apply freely after foot bath.

In a sprain the fibres of the ligaments are more or less torn. Every irritation tends to set up an inflammation which, when neglected, may become serious. Every motion of the joint when in this sensitive condition tends to cause irritation, and it may strain still further the ligamentous fibres. For that reason the rest should be absolute, and with the foot in an elevated position. If this rest is not possible I prefer to put the foot and leg in a plaster cast. This, however, prevents the pedilavia and other applications. Generally the cast must be worn a week. Stiffness of the joint may result if the cast is worn too long. A substitute for the cast, which in mild cases often gives excellent results, is found in encas-

ing the foot and ankle with adhesive strips, which should be worn two weeks.

In three or four days by open treatment, or in a week with the cast, the inflammation has generally subsided, and we must hasten the absorption of the exudate. This is best accomplished by gentle movements of the foot, without pressure for a day. Then the foot should be used, cautiously at first. Later the patient must be urged to take steps of equal lengths. Firm massage of the ankle, always rubbing upwards, also favors the absorption of the exudate. Of course if there is fracture of bone progress will be slower.

A neglected sprain, where the patient has attempted to work, may produce a synovitis, and this may furnish a good culture for the tubercle bacillus, and thus even threaten the life of the patient. The treatment of such a case before infection includes absolute rest of the joint in an elevated position, and a daily antiseptic bath, so long as inflammation exists. Sometimes in these cases hot applications give greater relief than cold, but more frequently good results are obtained by the constant application of cloths wrung out of cold water. As soon as the cloth becomes warm it should be changed. If it is not, the beneficial action is decreased and the treatment may cause harm. The ice bag is less troublesome, and also less efficient than the carefully tended cold cloths, but it is far preferable to neglected cloths. In these cases, too, the free use of the laudanum and arnica mixture is helpful. In the highly inflamed condition firm bandaging is painful and interferes with the circulation, and should not be permitted.

Other things being equal, the cases most likely to give trouble are in gouty subjects. It is well, therefore, to keep the kidneys and bowels active by the free use of carbonated waters, either plain, or as Vichy or Carlsbad. The citric fruits are also good. All liquors should be prohibited, and the patient should be cautioned against overeating, especially if he is accustomed to an active outdoor life.

Dr. P. B. Brooks, of Buffalo, remarks:

The method of treatment of a sprained ankle depends primarily upon the degree of severity of the sprain, as indicated by the amount of swelling and ecchymosis, and the extent of loss of function. For convenience the sprains may be classified as mild and severe.

It is worth while, in every case, to subject the injured ankle to careful examination to detect the possible presence of a complicating fracture about the malleolus. This is especially important in the less severe sprains, where the ambulant treatment, to be mentioned later, is to be adopted.

Absolute rest for a few days does no harm in the mild cases, and seem to me to be essential in those of greater severity, in spite of the fact that active manipulation is frequently advocated. But when, as often happens, a patient with a mild sprain is obliged to continue his usual activity, the ordinary adhesive plaster strapping may be applied, and the patient permitted to use the injured member.

The strapping consists of strips of adhesive plaster, preferably zinc oxide, varying in length from ten to twenty-four inches, and three quarters of an inch wide, alternating one applied in a vertical with one in a horizontal direction with the ankle turned slightly toward the injured side (to relieve tension upon the lacerated tissues) and until the ankle is completely encased in the plaster. The patient goes about with very little inconvenience, and recovery usually occurs promptly.

Severe sprains are best treated by rest in bed, with the bed clothing held away from the foot, for which purpose a half of a barrel hoop is simple and effective. If fracture can be excluded the immobilization may be left to the patient. A complicating fracture, of course, requires the use of an apparatus for immobilization, as, for instance, the Volkmann splint.

It seems to me that neither time nor function in the joint is lost if the ankle is immobilized for a week before massage is begun or any motion allowed. So long as any signs of inflammation remain, ice in rubber bags laid about the joint, or some other antiphlogistic agent, should be employed. Occasionally a dressing wet in solution of lead and opium, in addition to the ice, seems to add to the comfort of the patient.

In a few uncomplicated cases of moderate severity, where time saved is more important than the immediate comfort and convenience of the patient, the injured member may be placed in a foot bath and surrounded with cracked ice. This treatment may be continued for a few hours at a time, until the subsidence of the acute symptoms, taking care, of course, to see that the circulation in the foot is properly maintained.

As to massage, it should be withheld at least until the signs of inflammation have subsided and it can be applied without discomfort to the patient.

After severe sprains, when the patient is finally allowed to get about, it is often wise to support the ankle for several weeks with the adhesive plaster strapping mentioned above.

I have found this method to possess the following advantages: Lessened pain and swelling, and with the early use of the joint, made possible by the even and flexible support, speedy absorption of serous exudate. Recovery is more rapid and satisfactory than by any other method of which I have made use.

Dr. Edward H. Drozeski, of Erie, Pa., writes:

The term sprain refers to a condition which may vary widely in severity and extent of damage to the capsule, ligaments, and articular cartilages. Consequently the treatment will vary from very simple measures, as rest, cold applications, and a firm bandage, which would suffice in the mild cases constituting a large proportion of all to the more elaborate measures in severe sprains. The following outline, carried out in full, would meet the requirements of cases exhibiting more extensive surgical pathology.

In a sprain of the ankle seen while hæmorrhage, transudation, and swelling are still active, I believe the indications to be met may be clearly

defined: 1. Complete physiological rest. 2. Arrest of hæmorrhage and transudation in and around the joint, and alleviation of pain. 3. Reduction of hyperæmia and tumefaction already present. 4. Later, after subsidence of the acute features of the sprain, the main object of treatment should be measures to favor restoration of joint function and absorption of effused blood and serum.

Considering in detail these indications: 1. I always emphasize the extreme importance of absolute rest of the joint. A simple means which I have found effective in cases of ordinary severity is, to place the leg and foot in a pillow folded around the limb lengthwise and secured by broad strips of bandage tied on top. This soft, evenly padded splint may be reinforced by placing along either side a sandbag of good length to prevent the foot rolling to either side. But where there has been severe laceration of ligaments or the separation of the tip of a malleolus, the case should be treated as a fracture, immobilizing the joint by means of a plaster of Paris bandage or cast applied over a layer of thin wadding, and extending from the base of toes well above the joint. But the indiscriminate use of fixed dressings is to be condemned, for they may result in irremedial stiffness.

2. For the arrest of hæmorrhage and transudation the following measures meet all indications: Compression by means of a broad rubber bandage, elevation of the limb to a good angle on pillows or suitable support to facilitate venous depletion and absorption of effusion, and the application of ice bags around the joint. The cold usually has an anodyne effect, but opiates may be necessary, even morphine hypodermically, in severe cases.

3. Under these measures the acute symptoms usually subside within a few days. I continue the elevation and compression until all swelling is reduced, but after twenty-four to forty-eight hours substitute application of water bags, as hot as can be borne, believing that it favors resorption.

4. Measures to favor restoration of the joint function should never be delayed beyond the second week, excepting in rare cases complicated by fracture, and even then they should be begun during the third week to prevent stiffness. Passive motion and massage daily and methodically applied after a half hour's immersion in very hot water are the chief agents to attain this end. A 10 per cent. ointment of iodine or ichthyol applied by friction is a valuable resorbent agent. When a cast or plaster bandage has been applied it should now be removed daily to allow the above measures. This may be done by dividing it along the front and springing it apart, after which it may be reapplied and held together by a bandage. In several cases where localized tenderness persisted over the internal lateral ligament for some weeks, I had excellent results from the light application of the thermocautery over the tender area. Finally, when the use of the foot is resumed, a grateful sense of support may be obtained by firmly strapping the joint by one inch strips of adhesive plaster, slightly overlapping,

and encircling the ankle and foot above and below the joint. Where marked weakness or tendency of the joint to turn remains, a firmly fitting elastic ankle support should be worn, and, especially in women, broad low heeled shoes.

Correspondence.

LETTER FROM LONDON.

The New Parliament.—The Secret of Success in Medicine.—Sir Frederick Treves's Rectorial Oration.

LONDON, February 24, 1906.

The new House of Commons is now complete, and so far as the medical profession is concerned the result of the general election has been to leave it with eleven representatives in an assembly of 670. Twenty-two physicians wooed constituencies, and in just one half of that number was love's labor lost. But, insignificant as the representation of the profession is numerically, in reality it is still smaller. Of the eleven physicians who now enjoy the greatly valued privilege of appending the letters M. P. to their names, only two or three have anything more than a nominal connection with the profession. Of the whole number, only three count for anything, Sir Walter Foster, Sir John Batty Tuke, and Sir William Job Collins. Sir Walter Foster was for many years a prominent physician in Birmingham, but since the profession some eight years ago preferred Sir Victor Horsley as a direct representative on the General Medical Council, he has thrown in his lot with the politicians. And now the politicians, too, have rejected him. He expected and deserved high office, but the makers of the new Cabinet passed him over. In fact, they threw him out as a sacrifice of propitiation to the new Labor party. In the last Liberal administration, Foster was Parliamentary secretary to the Local Government Board. A large part of the work of that office relates to public health, and as Foster proved the usefulness of a medical expert in such a position, he naturally seemed to be marked out for the presidency of the board when his party returned to power. But the choice fell on John Burns, who in regard to medicine, represents the ignorance and prejudice of the working classes. Sir John Batty Tuke is a well known authority on mental diseases, and in that capacity should find a large field for the exercise of his special knowledge in the House. The medical profession has confidence in him, but unluckily the fairies who presided at his birth, while dowering him generously in the matter of intellect, forgot to give him the power to express his thoughts in speech. Sir William Job Collins is a man of great ability, with a personality that makes itself felt. Unfortunately, in regard to vaccination, his attitude is antagonistic to that of the medical profession. He was one of the two dissentient members who signed the minority report of the Royal Commission which is responsible for the existence of the "conscientious objector," and he is a leader in antivaccination Israel. He seldom loses a chance of scoffing

at the "Jennerian rite." His knowledge makes him dangerous, all the more since Sir Michael Foster, the physiologist, who also sat on the commission and who could bring superior weight of scientific metal to defend vaccination, lost his seat for the University of London. With Collins in the House of Commons and John Burns, a declared enemy, in the Local Government Board, the most to be hoped for is that the existing law under which vaccination is compulsory, unless "conscientious objection" is pleaded, will be left on the statute book. It may be taken for granted that its administration will be allowed to become more and more a dead letter. As for compulsory revaccination, which sanitarians have been striving for, that may be dismissed, for some years at least, as a dream. The late government, even in the days of its strength, was afraid to face the question, and it is hopeless to look for such a measure to a party which by virtue of its constitution represents all the fads and follies of the populace. The antivaccinists, the antivivisectionists, and other fanatics are exulting in the prospect of success thus afforded to their several agitations. There are various measures of reform affecting the medical profession, such as a stricter enforcement of the laws against quackery, a better system of death certification, security of tenure for medical officers of health, who are now at the mercy of local authorities, etc., which are sorely needed in the interest of the public not less than in that of the profession. But as far as bills providing for such reforms are concerned, the words which the poet says were written over another place, *Lasciate ogni speranza voi ch' entrate*, might appropriately be inscribed over the door of the present House of Commons. An attempt is to be made to revive the Medical Committee which was formed during the last Parliament, but died almost at its birth.

Sir Frederick Treves, who was elected lord rector of the University of Aberdeen not long ago, delivered his rectorial address on February 22nd. His theme was success in life, and in dealing with it he referred especially to the medical profession. The factors usually held to make for success, such as money, influence, and social position, and above all the possession of genius, he dismissed as of little or no account. Money, he said, was supposed to enable a man to devote his energies to original research unhampered by the drudgery of earning his daily bread. But Treves does not consider such drudgery unproductive, and he has often noticed that the much extolled leisure of the man of means is apt to be devoted to original research in such pursuits as golf and fly fishing. If it is hard for a rich man to enter the kingdom of heaven, it is still harder, he thinks, for a man so burdened to enter with advantage upon the career of medicine. Treves refuses to accept luck as an element of success; he holds that luck in any serious profession means nothing more than that the man to whom it comes is ready to take advantage of an opportunity when it offers itself. As for genius, he maintains that in its crude or native

state it is not wanted in the profession of medicine; and it cannot, he thinks, be said to be a marked attribute of the men, like Harvey, Hunter, and Lister, who raised themselves to the highest position in that calling. Genius in a physician is apt to give us flippancy, instantaneous diagnoses, the detection of disease by instinct, and other astounding phenomena which one attributes rather to the charlatan. In like manner, according to Treves, brilliancy is a quality from the possession of which surgery might well pray to be freed. In the days before anæsthetics the chief qualification of the operator was rapidity of execution. Now success in surgery is measured, not by the duration of the operation, but by the duration of the recovery therefrom. The synthetically composed genius is, in the lord rector's opinion, better for professional work than the congenital form, for into its making enters the genius for hard work, for patient observation and experiment, and for persistent reasoning. These factors are within the reach of any mortal who is determined to claim them and make use of them.

Therapeutical Notes.

Modification of Blaud's Pills for Anæmia:

- R Ferri sulphatis.....gr. iss;
Sodii bicarbonatis.....gr. xii;
Ol. morrhue.....gr. xx.
M. Ft. capsulæ No. xx. Take one after each meal.

Journal de médecine de Bordeaux, February 11, 1906.

Dosage of Quinine Formate.—G. H. Lemoine (*Bulletin et memoire de la Société médicale des hôpitaux de Paris*, February 1, 1906), in the treatment of malarial attacks, administers at the access a hypodermic injection of quinine formate 0.20 grammes (3 grains), dissolved in water 4 c.c. (or 1 ounce) which corresponds in efficiency with twice the quantity of neutral hydrochlorate.

Treatment of Tinea:

- R Unguent. picis lig. (.....)ãã 100 parts;
Olei camphorat. (.....)ãã 10 parts.
Sulphuris. (.....)ãã 10 parts.
Potassii carb. (pulv.) (.....)ãã 10 parts.
M. Ft. unguentum.

Once a day, area to be well rubbed with this ointment applied by means of a brush.—*La Tribune médicale*.

Calcium Chloride as a Means of Preventing Eruptions from Antitoxine.—M. Netter, in a communication read before the Société de biologie (*La Tribune médicale*, February 7, 1906), stated that the administration of one gramme of calcium chloride on the same day as that on which the injection of antidiphtheritic serum is made, and on the two succeeding days, will prevent, in great measure, at least, the skin eruption, which sometimes follows such injection. His statistics were based on a total of 516 infants, half of which number received the injection alone and the others also received the calcium chloride. Among the latter, the proportion of those presenting an

eruption was only six per cent., whereas among the controls the proportion was forty per cent.

A Salt Free Diet in Scarlatina.—H. Pater, in a communication to the Société médicale des hôpitaux de Paris (*La Tribune médicale*, February 3, 1906), reports the good effects of withholding sodium chloride in large degree from the diet in scarlatina. In fifteen cases he carefully observed the curve of the body weight and those of the chlorides and of urea. Six were put upon a strict milk diet, and their results confirmed former reports concerning the variation of weight in the course of scarlatina. The nine remaining were put upon a chloride free diet at various dates from the onset of the disease. The following deductions were made: (1) The salt free regimen is always well borne by the patient. It is the more useful when given near the date of the outbreak of the disease, because immediately after taking it the curve of the weight is upward and it steadily increases, so that convalescence sets in immediately after the restoration of the temperature to the normal; at the time when the sick person is allowed to eat food. In fact, owing to this diet, the system at this time is in a better state to strive against secondary inflammations or associated diseases. A febrile albuminuria at the beginning will promptly disappear if this restricted diet is adopted, so that salt free medication is both inoffensive to the kidneys and profitable to general nutrition. It appears, therefore, to be the ideal regimen in scarlet fever as soon as the fever has ceased.

Successful Method of Treating Ulcerating or Vegetating Scrofuloderma.—In all cases of chronic, nonsyphilitic ulcers, R. Sabouraud, of Paris (*La Clinique*, February 23, 1906), recommends an ingenious procedure which is of Italian origin, but which was introduced into France by E. Besnier. It consists of a double cauterization, resulting from the application of a crayon of silver nitrate, followed by another of metallic zinc. The silver nitrate may be used in the form of the Pharmacopœial, lunar caustic. The crayon of zinc may be of any convenient size or shape, and it is recommended to have several of different forms, and with terminations round, olive pointed, flat, or acute, as desired. In making the application the silver nitrate is rubbed over the fungosities or vegetations, which are to be destroyed, or along the course of a fistula. This being done, the zinc is carried over the same tissues which immediately are blackened by the liberation of the silver, and the patient experiences a sharp pain. Cauterization is due to the decomposition of the silver nitrate and the formation of acid zinc nitrate. While the black color of the colloidal silver is a slight objection, the results are so successful as to overcome it. This cauterization of exuberant granulations is repeated once or twice a week. It is also a good treatment for soft chancres and ulcers of the legs in tuberculous sinuses and in all ulcers that are slow in healing. Previous to the use of the zinc crayon, it should be rubbed with a file, or on emery paper, so as to present a shining metallic surface on the part to be used. After the cauterization, it is

recommended to dress the ulcer with ferrous carbonate. The surface is to be cleaned off daily with absorbent cotton, moistened with oil of sweet almonds.

The Value of Preliminary Injections of Antistreptococcic Serum in Mouth Operations.—Charles Willems, at the last French Congress of Surgery, reported the results which he had obtained by giving preventive injections of antistreptococcus serum prior to surgical operations within the mouth. These injections, which were first recommended by Professor Denys, have already been practised by Lawers, de Coustrai, and Goris, of Brussels, who, it is claimed, from them obtained remarkable results. It was especially in uranostaphylorrhaphy that Willems adopted this method. Instead of the usual gray looking, unhealthy wound following the operation, the edges were absolutely clean. The wound remained perfectly clear and red, without the slightest exudation; the difference was very striking to those who had seen the results which follow the usual method. A still more striking result was the absence of deep infection in the line of reunion. There was also a larger proportion of cases of complete union from the first operation. The great advantage of the injections was that subsequent treatment was rendered unnecessary; and the repose of the parts facilitated the cure. As regards dosage, M. Denys recommends 30 to 40 c.c. as the preventive dose, M. Willems does not go beyond 20 c.c. the night before; and he often gives a second injection of the same quantity at the termination of the operation. The only inconvenience of the injection is that it sometimes causes a little fever, or tachycardia, and in a few days, sometimes sooner, it may cause an eruption of urticaria.—*Journal des sciences médicales de Lille*, February 3, 1906.

The Use of Thyreoid Extract in Certain Forms of Chronic Rheumatism.—Paul Claisse (*La Clinique*, January 5, 1906), after pointing out the impropriety of applying the name rheumatism to these chronic conditions (the title should be reserved for the typical acute disease), indicates a class of cases which are commonly spoken of as chronic rheumatism, but which in reality are not inflammatory, but degenerative in character. The patients are generally of advanced age, past the sixtieth year, who at first sight appear to be gouty. But on close examination there are found marked diagnostic differences. In place of increased arterial tension, it is subnormal, appetite is poor, the digestive functions slowly and imperfectly performed, urine scanty and contains very little urea. The intelligence is dull and the subject frequently somnolent. The patient appears obese, but the tissues are puffed out with serosity overcharged with fat. In fact, the appearance of the integuments is that of myxœdematous infiltration. Acting upon the inference that the depression of the vital functions in this condition is analogous to that which occurs in myxœdema, Claisse attributed the muscular and joint pains to the latter condition. He, therefore, concluded that they should be treated by

the same method, that is, by the thyreoid extract. Clinical trial proved this to be successful. The pulse rate and tension were increased, the digestion improved, the quantity of urine increased as well as the proportion of urea, and a general increase in vitality was observed. At the same time the pains decreased, and the nodosities and deformities disappeared. The skin regained its suppleness, perspiration returned, and the nails began to grow. It was also noted that eczematous lesions disappeared. No irritation of the kidneys occurred, and in cases with albuminuria and glycosuria, the urine became normal. The presence of albumin is, therefore, not an absolute contraindication to this method. The duration and frequency of the administration of thyreoid extract should be governed by the effect upon the pulse, which should not be allowed to go above 100 to 115, and the patient should be kept under observation.

Treatment of Tetanus by Antitetanic Serum and Chloral Hydrate.—Spillmann and Nilus (*Revue médicale de l'Est*, February 15, 1906) report the successful result of treatment in a young man, sixteen years of age, who suffered lacerations and contusion of the fingers of his left hand by a large stone falling upon them. Sixteen days later he complained of vague pains along his spine, and on the following morning observed stiffness of his neck. Towards evening he had a typical attack of trismus, with biting of the tongue. He was ordered four enemata, each containing one gramme of chloral. On the following four days his condition became considerably aggravated. He had complete opisthotonos, his body being arched and supported by his head and heels. The muscles were rigid, and at times there were general spasmodic movements. Temperature remained normal. At this time (fifth day of disease), injections of ten c.c. of antitetanic serum were added to the treatment. Six chloral enemata were given in twenty-four hours, and two injections of serum. This treatment was continued for three days, then one injection of serum daily was given for three days, making, in all, 90 c.c. of antitetanic serum in six days. At this time the serum was suspended, but the chloral continued in the same doses. He had one slight convulsion with biting of his tongue on the thirtieth day. Two weeks later he was convalescent, and was allowed to walk about. He now had an attack of skin eruption, resembling urticaria, which was general, and lasted fifteen days. The urine was free from albumin all through the progress of the disease. The patient made a complete recovery. In another case, an artilleryman, who entered the hospital fifteen days after crushing his right thumb, trismus developed on the day of admittance. Large doses of chloral hydrate were given, and on the fifth day of treatment an injection of 50 c.c. of antitetanic serum was made. The symptoms gradually diminished in intensity, and had disappeared entirely at the end of six weeks. A special advantage is gained in the treatment by combining with the antitetanic serum which attenuates the toxins, the chloral which acts as an antispasmodic and limits cellular reaction.

NEW YORK MEDICAL JOURNAL

INCORPORATING THE

Philadelphia Medical Journal
and The Medical News.*A Weekly Review of Medicine.*

Edited by

FRANK P. FOSTER, M. D.,
and SMITH ELY JELLIFFE, M. D.

Address all business communications to

A. R. ELLIOTT PUBLISHING COMPANY,

Publishers,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, MARCH 24, 1906.

MEDICAL TEACHING IN OHIO.

There has recently been organized the Ohio Association of Medical Teachers, consisting of active and associate members, the former comprising the professors in the medical schools of the State, together with the members of the State Board of Medical Registration and Examination, and the latter including the teachers of chemistry and the biological sciences in the literary colleges. We learn that about fifty persons eligible to membership were present at the time of the organization, and that most of them joined the association then. On the very day of its formation, December 26th, the new organization proceeded to the consideration of weighty matters. The medical curriculum was the subject of papers by Dr. C. C. Howard, of Starling Medical College, who dealt with the first two years of the course, and by Dr. J. C. Oliver, of Miami Medical College, who spoke of the second two years. The other papers were on the general subject of the relations of the literary and medical colleges, especially on the advanced standing in a medical school that might properly be allowed in consideration of the student's having pursued the study of chemistry and biology in a literary college. They were presented by Dr. R. P. Daniels, of Toledo Medical College; Dr. A. Ravogli, of the Medical College of Ohio; Dr. G. M. Waters, of Ohio Medical University; Dr. C. F. Clark, of Starling Medical College, and Dr. F. C. Waite, of the Medical Department of the Western Reserve University.

In the evening there was a joint session with

the Ohio College Association, and the papers then presented turned upon the same question of advanced standing, a question that was undoubtedly rendered more than usually prominent by the fact that the State Board of Medical Registration and Examination had passed this resolution: "That, after 1905, advanced standing which has been given for A. B. and B. S. degrees be not recognized by this board unless the candidate to whom it has been given has, during the academic course, done the science work comprised in the first year of the medical course." There can be no doubt, we think, that the stand taken by the board in the resolution is perfectly correct, and it was fortunate that in the joint session a member of the board, Dr. E. J. Wilson, presented a paper upon the question of what scientific work in the literary course would be held by the board as satisfying the requirements of the resolution. It is highly desirable of course that the scientific work done in the academic colleges of the State should be practically uniform, and that it should satisfy the board's requirements for advanced standing in the medical schools. Such a result, it seems to us, can hardly fail to occur after so well planned a procedure as the organization of the Ohio Association of Medical Teachers and its joint session with the Ohio College Association. In other respects, too, much good must come from the movement.

THE OPSONIC POWER OF THE BLOOD AND
THE DIAGNOSIS OF TUBERCULOUS
DISEASE.

The theory of phagocytosis seemed to explain the method of the defense of the organism against an invading microorganism in a most satisfactory way. The studies of Metchnikoff stimulated many observers, and the results of subsequent investigations, it seems, have confirmed in a general way the hypothesis then put forward. Minor details have required modification, but it is still supposed that the leucocytes are the active elements in the prevention of infection and in the production of immunity.

Among the prominent students of the problems presented by the theories of Metchnikoff, Wright and Douglas are to be mentioned. In 1903 (*Proceedings of the Royal Society*, lxxii), they showed that washed leucocytes possessed no phagocytic power when brought in contact with staphylococci, but that if normal human serum or blood plasma was first added to the staphylococci, and the organisms were then brought in contact with washed leucocytes, the phagocytic power of the leucocytes would return. The sub-

stance contained in the serum which served to render the staphylococci susceptible to the phagocytic power of the leucocytes they termed opsonin. To determine the opsonic power of a given blood, one volume of the serum is mixed with equal volumes of a bacterial suspension and of washed leucocytes. After incubation at 37° C. for fifteen or twenty minutes, smears are made in the usual manner, fixed, and stained, and the bacteria within the leucocytes counted. The number of bacteria ingested divided by the number of leucocytes counted equals the opsonic index.

Wright and Reid (*Proceedings of the Royal Society*, lxxvii, January 30, 1906) have been studying the opsonic index of tuberculous patients. They find that in cases of strictly localized tuberculous disease the index is uniformly low. In cases associated with constitutional disturbance the index is continually varying, fluctuating from considerably under the normal to twice as much or more above it. The studies of Urwick, Bulloch (*Medico-Chirurgical Society Proceedings*, 1905), and Lawson and Stewart show that the tuberculoopsonic power of the blood does not range below 0.9 or above 1.1 in health. Wright and Reid consider the condition of low opsonic power associated with strictly localized tuberculous disease to be a condition which has preceded and furnished the opportunity for infection. The persistently low opsonic index after infection indicates that the machinery of immunization is not spontaneously called into play in such cases. The constant fluctuation of the opsonic index in the active forms of tuberculous infection furnishes evidence of a periodic conveyance of tuberculous elements into the blood and the accompanying response on the part of the machinery for immunization. Hence a patient with active tuberculosis will present constantly alternating negative phases (low opsonic index) when the tuberculous material first enters the blood, and positive phases (high opsonic index) when the reaction has taken place.

When a series of observations of the opsonic index of the blood of a patient with supposed tuberculous disease are at hand, the following conclusions may be drawn: A persistently low opsonic power with respect to the tubercle bacillus points to the tuberculous character of a local infection. A persistently normal opsonic power, on the other hand, points to another infecting agent than the tubercle bacillus. A constantly fluctuating opsonic power points to the presence of an active tuberculous lesion.

When an isolated observation alone is available, the following conclusions may be drawn: A

low tuberculoopsonic power indicates tuberculous disease if the infection is localized; if, on the other hand, there is constitutional disturbance, it indicates an active systemic infection. A high opsonic power indicates a systemic tuberculous infection which is active or has recently been active. A normal or nearly normal opsonic power with the presence of symptoms suggestive of tuberculous disease does not warrant a positive or a negative diagnosis, unless after keeping the serum heated to 60° C. for ten minutes it still retains its power of inciting phagocytosis. In such a case the inference is that, in response to self inoculations occurring spontaneously in the course of tuberculous infection or under the artificial stimulus supplied by the inoculation of tuberculous material, "incitor elements" have been elaborated in the organism.

AN APPARATUS FOR TESTING THE EFFICIENCY OF CULICICIDES.

The problem of disinfection against a bacterial disease is very different from that of preventing a disease due to an animal parasite, such as malarial fever and probably yellow fever. In the former case one deals with the organisms directly; in the latter case with the intermediary host, the mosquito. In attempting to destroy mosquitoes the fumigant used, in order to be satisfactory, should kill quickly and surely, be diffused rapidly and completely, penetrate wherever a mosquito can hide, leave no poisonous residues or fumes, and have no effect on fixtures or any material likely to be exposed to its action. As a rule, mosquitoes are first stupefied by the action of almost any fumigant and actually die after a varying period. Arthur I. Kendall (*Bulletin of the Laboratory of the Board of Health, Isthmian Canal Commission*, No. 1, 1906) has designed an ingenious apparatus for testing the efficiency of fumigants for killing mosquitoes. It consists of an air tight box, which contains a definite amount of space so arranged that the various dimensions shall approximately represent the proportions obtaining in an ordinary room with respect to ratio of length, width, and height. This box is furnished with appropriate doors and has apertures of convenient size at different levels in which cylinders of wire gauze containing mosquitoes may be placed. These cylinders are closed at one end by a disc of wire netting and at the other end by a truncated cone of wood which accurately fits the aperture, closing it, while at the same time it supports the entire wire cage as the latter projects into the interior of the box. The substance to be tested

is burned in the box and the cages are removed from time to time and the condition of the contained insects is examined. When a cage is removed the aperture is quickly closed by a cork of suitable size. The culicicides commonly used are sulphur and pyrethrum. Sulphur has been found to be the best fumigating agent, a pound being necessary to every 1,000 cubic feet. This agent kills mosquitoes from an hour to an hour and a half. Pyrethrum is fairly efficient when dry, but less thorough when damp. Two pounds of pyrethrum should be used to every 1,000 cubic feet. It is often impossible to kill the mosquitoes near the floor of the box, and probably of a room, with this substance.

RETROVERSION OF THE UTERUS.

The generally unsatisfactory performance of the textbook pessary, together with the recognized need of continuing its use indefinitely when it did prove efficient, establishing what might be called pessary life, long ago inclined gynecologists to question the wisdom of treating backward displacements of the uterus at all, save in exceptional instances. Then came the era of operative procedures, and those displacements resumed the importance that for a time had been denied them. Various have been the operations for the cure of retroversion within the last few years, but not yet has any one procedure been found to meet the requirements in all cases.

A rather notable discussion of the subject took place on Tuesday evening, February 20th, at a meeting of the Section in Obstetrics and Gynecology of the New York Academy of Medicine. A decided diversity of views was manifested as to the permanent benefit to be conferred by different operations, but it was agreed by all who spoke on the point that the use of a pessary, begun soon after the puerperium, was exceedingly efficacious in preventing the retroversion incident to uterine subinvolution from becoming chronic and intractable. Under such circumstances, it was held, the temporary use of a pessary would allow the natural supporting structures to regain their tonicity as involution proceeded.

As for the Alexander operation, one speaker was decidedly opposed to it in its original form, maintaining that it was very prone to give rise to hernia; some others, however, had performed it many times and had never observed hernia as a result. The intraabdominal operation on the round ligaments was preferred by several. One gentleman argued in favor of fixation of the uterus to the anterior wall of the vagina, but an-

other thought ventrosuspension far less likely to involve a liability to dystocia. This speaker, an obstetrician of large experience, reported that in three instances he had been obliged to perform the Cæsarean section on account of abnormalities due to operations for retroversion. Another obstetrician, also of great experience, thought that dystocia as the result of such operations was very rare, but that when it did occur it was "as bad as it could be." From this unsettled state of opinion there must, we hope, be developed before long a condition of practical unanimity as to the course to be pursued in the general run of cases. The present disagreement is certainly very unsatisfactory.

ANKYLOSTOMIASIS IN BELGIUM.

This ailment has grown into such importance, according to the report of Consul McNally, of Liège, Belgium, that tabulated statements and records of the disease occupied a large space in the department of hygiene of the recent Liège International Exposition, which was designed to show the origin of the disease, its development, and its consequences, and to point out the measures necessary to prevent its spread as well as the stringent regulations adopted by the authorities to stamp it out, all of which are of interest to us, as ankylostomiasis, or, as Stiles has termed it, uncinariasis, shows promise of being very prevalent in the United States. Its ravages in Belgium within the last few years have been such as to elicit the interest, not only of the Belgian communal and provincial governments, but also that of the central government itself. It seems that the disease was brought originally into Belgium by Italian laborers who had worked in the St. Gothard tunnel. It first appeared in the Belgian coal mines in 1884 and rapidly became epidemic. It then subsided, only to break out afresh in a most violent form, with a singularly large death rate, which lasted until 1899, when the provincial medical board, in conjunction with the Institution of Bacteriology, organized a system to eradicate it if possible, or at least to prevent its further spread throughout the province of Liège.

While this disease is commonly regarded as one that is almost special to miners, it is known that persons working in a warm, humid atmosphere with little ventilation and no attention given to cleanliness have also been stricken. The mine owners have heartily cooperated with the authorities. Sanitation in the coal mines has been made as efficient as possible. Latrines separate from the immediate place of work have been

established, and the failure of any laborer to comply with the regulations pertaining thereto is met by instant dismissal of the offender. The workmen are cautioned not to drink the water found in the mine, but to use only such as comes from the surface. They are instructed not to eat anything from their hands or to allow any part of their hands to come in contact with their mouths until they have been thoroughly washed. Pamphlets treating of the disease have been distributed among the miners, and the Minister of Industries and Labor has organized a commission to revise the mining system and to establish sanitary measures previously unknown.

Under these stringent influences, the disease has been at least checked, reports from the mines at Mons and Charleroi showing but seven and ten per cent. of the employees to be affected. But at the coal mines of the Nouvelle Montagne Company at Englis, seventy-five per cent. of the miners were suffering from the malady, and sixty-seven per cent. of those at the Gosson Lagasse mine were down with it, before the sanitary improvements were made. Now, thanks to the energetic action of the provincial authorities and the hearty cooperation of the mine owners in making improvements as rapidly as they were suggested, the disease has been so checked that there are, according to the latest reports, but a few sporadic cases. Nearly all the mines, however, in the province have been affected, the proportion of persons attacked varying from twenty-five to seventy-five per cent. of the underground workers. In the coal fields of Seraing the disease was highly epidemic and the loss of life very great in comparison with the number affected.

TUBERCULOUS DISEASE OF THE THORACIC DUCT AND MILIARY TUBERCULOSIS.

The irruption of numerous miliary tubercles in the various organs of the body can occur only as the result of the sudden entrance of many tubercle bacilli into the circulation. The researches of Weigert (1877) showed that in many cases the tubercles giving rise to general miliary tuberculosis were situated in the walls of the bloodvessels. Observations of tuberculosis of the thoracic duct by Sir Astley Cooper (1798) and by Ponfick (1877) pointed to another source of origin for the sudden flooding of the circulation with tubercle bacilli. Large numbers of tubercle bacilli may enter the circulation by the rupture of a tuberculous cavity into a pulmonary vein (Huguenin) or by the opening of a caseous lymph node into a vessel (Koch).

Recently Longcope (*Proceedings of the Pathological Society of Philadelphia*, N. S., viii, 5, 1905) has studied the relation of tuberculous disease of the thoracic duct to acute general miliary tuberculosis. In twenty-five cases in which the process was more or less generalized special attention was paid to the study of the thoracic duct as a possible point of origin for the generalized process. In twelve out of seventeen cases of typical generalized acute miliary tuberculosis the thoracic duct showed a more or less extensive tuberculous disease, usually with caseous nodules, while in one instance, though there was no involvement of the wall of the vessel, many tubercle bacilli were found in smears from the duct lymph. In six cases the generalized process was subacute or chronic. In only two of these was tuberculous disease of the thoracic duct discovered at autopsy. In two cases in which the disease was confined to the lungs and the peritonæum the thoracic duct was normal. The type of lesion varied; sometimes there was a single large caseous nodule, usually near the receptaculum chyli or about the arch of the aorta, and at other times several caseous nodules were scattered through the duct. The thoracic duct, therefore, appears to be of great importance as a channel for the spread of tubercle bacilli through the body from the various groups of lymph nodes. The train of events is probably as follows: Tubercle bacilli pass from adjacent tuberculous lymph nodes to the thoracic duct, where they lodge and produce a localized lesion which breaks down, allowing large numbers of tubercle bacilli to be liberated into the lymph, whence they reach the general circulation.

PROPRIETARY MEDICAL SCHOOLS.

The ultimate fate of these schools has long been only a question of time. That the time is to be brief, we have fresh evidence in certain facts recounted in the January number of the *Columbus Medical Journal*. It seems that the freshman classes of seven medical colleges in Ohio have an aggregate membership of only 205, the largest one consisting of but forty-five. It is very expensive to conduct a modern medical school that has to satisfy the requirements of recent legislation, and schools that are not amply endowed or are not a department of a prosperous university must generally go to the wall before many years have passed. The only chance of escape that we can see is for the medical schools, individually or after the consolidation

of several into one, to take refuge under the wing of a university.

THE NAUSEA DUE TO TÆNIACIDES.

The nausea and vomiting that are apt to follow the ingestion of a remedy for tapeworm are sometimes very distressing. Apolant (*Deutsche medizinische Wochenschrift*, 1905, No. 44; *Berliner klinische Wochenschrift*, February 12th) recommends menthol as a preventive. One or two capsules, each containing about five grains of menthol and an equal amount of sugar of milk, are to be taken.

Obituary.

WILLIAM GORDON NILES, M. D.,

OF PHILADELPHIA.

Dr. Niles died in the Presbyterian Hospital, Philadelphia, on Friday, March 16th, of acute miliary tuberculosis. He was born in Canada on January 18, 1880. He spent two years in the College of Physicians and Surgeons of San Francisco, and then entered the third year class of the Jefferson Medical College, from which institution he was graduated in 1904. After serving for a year as surgeon to a mining company in Mexico Dr. Niles entered upon his duties as resident physician in the Presbyterian Hospital in Philadelphia. At the time of his death he had about six months of his hospital service before him. He is to be buried in San Diego, Cal.

News Items.

NEW YORK CITY AND STATE

A Dinner in Honor of Dr. T. W. Eden, of London, was given on Wednesday, March 21st, by Dr. J. Clifton Edgar, at the University Club, New York.

The Society of Physicians of the Village of Canandaigua, N. Y.—A meeting was held on Thursday evening, March 8th, with Dr. P. M. Donovan in the chair. Dr. W. P. Clapper, of Victor, read a paper on Syphilis.

The Oswego (N. Y.) Physicians' Association.—At a meeting held on the evening of Thursday, March 8th, officers were elected as follows: President, Dr. J. P. Dwyer; vice-president, Dr. M. E. Page; secretary-treasurer, Dr. P. M. Dowd.

The Saratoga (N. Y.) Medical Society.—The programme for a meeting held on Friday evening, March 23rd, included the following titles: Symptoms and Diagnosis of Abscess of the Kidney, by Dr. F. J. Resseguie; Therapeutics of Artificial Digestants, by Dr. George S. Towne; Report of a Case, by Dr. George H. Fish.

The Syracuse (N. Y.) Academy of Medicine.—The following was the programme arranged for a meeting held on Tuesday, March 20th: Report of Two Cases, with Presentation of Patients, by Dr. I. H. Levy; Milk Chemistry, by Dr. George Hanford; Dairy Bacteriology, by Dr. W. H. May; Certified Milk, by Dr. A. C. Mercer.

The Association of Ex-Internes of the Long Island College Hospital held its annual meeting and dinner at the Clarendon Hotel, Brooklyn, on Saturday, March 17. There were no set speeches, but short talks were made by several members. Officers for the ensuing year were elected as follows: President, Dr. William Pool; vice-president, Dr. J. O. Polak; secretary and treasurer, Dr. Clarence Hyde.

The Washington Heights Hospital.—An examination for two internes will take place at the residence of Dr. P. W.

Nathan, 107 East Seventy-ninth Street, April 16, 1906, at 8 p. m., sharp. Term of service 18 months, and includes ambulance service. Those desirous of taking the examination will please address Dr. Henry M. Kalvin, secretary to the medical board, 336 East Sixty-ninth Street, New York.

The Ontario (N. Y.) County Society of Health Officers.—At a meeting of the health officers of the county of Ontario, held at Canandaigua, on Monday, March 12th, a permanent county society was formed for organized effort along lines pertaining to the health departments of the various villages and towns of the county. The following officers were chosen: President, Dr. Orlando J. Hallenbeck, of Canandaigua; vice-president, Dr. D. S. Allen, of Seneca; secretary, Dr. D. A. Eiseline, of Shortsville.

The New York Skin and Cancer Hospital.—A course of four special lectures on The Principles and Application of Local Treatment of Diseases of the Skin will be delivered in the out patient hall of the hospital by Dr. L. Duncan Bulkley, at 4:15 o'clock on the afternoons of Wednesday, March 21st and 28th, and April 4th and 11th. On Wednesday, April 18th, a clinical lecture on Malignant and Non-malignant Growths, will be given by Dr. William S. Bainbridge. These lectures will be free to the medical profession.

The Proposed Seaside Park for New York.—A substitute bill for the Tompkins bill, which seeks to establish a seaside park for the health and recreation of citizens of the city of New York, has been passed at Albany by the assembly cities committee. The bill authorizes the board of estimate, by a majority vote, to appropriate \$1,500,000 for the purpose. Care of the park is devolved upon the park department. The board of estimate is to have power, whenever it has appropriated a sum sufficient for the erection and maintenance of a hospital in the park, to withdraw from the jurisdiction of the park department any portion of the park it may deem proper and confer jurisdiction over the same on the board of health, or the trustees of Bellevue and allied hospitals, or the commissioner of charities.

The New York Academy of Medicine.—At a meeting to be held on the evening of Thursday, March 29th, there will be presented a symposium on the Training of Nurses, arranged as follows: The Organization and Control of Training Schools, by Mr. George P. Ludlam, superintendent of the New York Hospital; What Nurses Should Be Taught, by Miss Mary A. Samuels, superintendent of the Roosevelt Hospital Training School for Nurses; The Overtrained Nurse, by Dr. W. Gilman Thompson; The Trained Nurse and Medicine, by Dr. A. A. Smith; The Trained Nurse and Surgery, by Dr. Robert Abbe. To be followed by a general discussion by Dr. W. P. Northrup, Dr. Walter B. James, Dr. Henry P. Loomis, and others.

The Section in Laryngology and Rhinology will present the following programme at a meeting to be held on Wednesday evening, March 28th: Presentation of patients: A Case of Leucoplakia Treated by Radium, by Dr. W. Freudenthal; Papers: (a) Rheumatic Cricothyroid Ankylosis, with Report of a Case, by Dr. H. P. Moseley; (b) The Technic of the Submucous Resection, by Dr. Sidney Yankauer; (c) Some Cases of Submucous Resection, by Dr. W. W. Carter; Presentation of specimens and new instruments.

The American Urological Association.—A called meeting will be held on Tuesday, April 3, 1906, at 7.30 p. m. punctually, at the New York Athletic Club, Central Park South and Sixth Avenue, Manhattan. The following is the order of business: (a) Organization of the Second Section of the association, comprising New York, Pennsylvania, New Jersey, West Virginia, Maryland, Virginia, and Delaware. (b) Election of officers of the Second Section. Scientific programme: (a) Presentation of patients; (b) Demonstration of instruments, apparatus, and specimens; (c) Paper of the evening: Surgery of the Ureter, by Dr. Eugene Fuller; (d) Discussions, limited strictly to ten minutes each: (1) The Symptomatology of Ureteral Diseases, by Dr. Douglas H. Stewart; (2) The Differentiation of Ureteral from Other Epithelia, by Dr. Louis Heitzmann; (3) Ski-ascopy in Ureteral Diseases, by Dr. W. E. Deeks; (4) Ureteral Meatoscopy, by Dr. William K. Otis; (5) Ureteral Calculus and the Gynecological Conditions Simulating Ureteral Diseases, by Dr. Howard A. Kelly; (6) Ureteral Lavage, by Dr. Winfield Ayres; (7) Rectal Anastomosis of the Ureter, by Dr. Carl Beck; (8) general discussion. Each participant will occupy the floor five minutes and will

please to furnish the secretary a copy of his remarks prepared for publication.

Society Meetings for the Coming Week:

MONDAY, March 26th.—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, March 27th.—New York Medical Union (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Va., Academy of Medicine and Surgery; Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, March 28th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private); Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

PHILADELPHIA AND THE MIDDLE STATES.

Placarding Tuberculosis.—Placards are to be placed on the houses inhabited by tuberculous patients in Oil City, Pa.

The Elizabeth (N. J.) Medical Club.—The regular monthly meeting of the club was held at the Alexian Brothers' Hospital, on March 13, 1906. The essayist, Dr. Arthur Stern, chose for his subject, Abdominal Pain.

Philadelphia Personals.—Dr. Clarence W. Lincoln, of Ridley Park, Pa., and Dr. James G. Espey, of Trinidad, Colo., are registered at the Philadelphia Polyclinic and College for Graduates in Medicine.

Hospital for Lakewood, N. J.—The Sisters of St. Joseph have purchased twenty-three acres of land in Lakewood, N. J., upon which they intend to build a modern hospital building.

The Pennsylvania State Pharmaceutical Board intends to bring action against certain druggists in Philadelphia for intrusting the compounding of prescriptions to clerks without the proper State license.

Philadelphia Municipal Hospital Census:

	Remaining last report.	Re- ceived.	Dis- charged.	Died.	Re- maining
Diphtheria	82	112	71	18	14
Scarlet fever	137	47	54	1	126
Other diseases	1	0	1	0	0

The Clinical Society of the Elizabeth (N. J.) Hospital and Dispensary.—The programme for a meeting of this society, held on Tuesday evening, March 20th, included a paper by Dr. N. W. Voorhees, on Optimism Rather Than Pessimism in the Use of Drugs.

Resignation of a Railway Surgeon.—After an active and continuous service for over twenty-seven years, Dr. Victor Mravlag has resigned as surgeon of the Pennsylvania Railroad for Elizabeth, N. J., and vicinity. He has been succeeded by Dr. James S. Green.

The D. Hayes Agnew Surgical Society of Undergraduates of the University of Pennsylvania held its annual smoker at the University Club on the evening of March 16th. Dr. Edward Martin was toastmaster. Addresses were made by Dr. J. William White, Dr. Charles H. Frazier, and Dr. John H. Jopson.

The Lehigh County (Pa.) Medical Society held its annual banquet in Allentown, Pa., on March 13th. Dr. C. J. Otto officiated as toastmaster. Toasts were responded to by Dr. W. A. Backenstoe, Dr. Edwin M. Bingham, Dr. M. F. Cawley, Dr. C. D. Schaeffer, Dr. F. A. Fetherolf, and Dr. H. H. Riegel. Thirty members of the society attended.

Scientific Society Meetings in Philadelphia for the Week Ending March 31, 1906.—Monday, March 26th, Mineralogical and Geological Section, Academy of Natural Sciences; Society of Normal and Pathological Physiology, University of Pennsylvania. Tuesday, March 27th, Philadelphia Neurological Society. Wednesday, March 28th, Philadelphia County Medical Society. Friday March 30th, South Branch, Philadelphia County Medical Society.

Westmoreland Hospital Attacked by a Mob.—After a railroad accident at Radebaugh, Pa., on Thursday, March

8th, twenty or more Italian and Austrian laborers were admitted to the Westmoreland Hospital at Gransburg, Pa. On Saturday night, after several of the relatives and friends of the patients were refused admittance to the hospital, they returned with about 100 compatriots and proceeded to storm the institution. It required the services of some of the new State constabulary to quiet the mob.

The Philadelphia Clinic for the Home Treatment of Consumption was organized at 519 South Fifteenth Street. The object of the institution is to furnish treatment and nursing for patients who cannot be accommodated in hospitals and sanatoria. The following gentlemen comprise the Board of Managers: President, Dr. Frank Read; vice-president, James E. Wilson; secretary, Ralph H. Spangler; treasurer, Maurice E. Benton; managers: Dr. John D. McLean, James H. Glenn, Dr. Matthew Woods, and Dr. Thomas J. Mays. On the medical staff are Dr. Mays, Dr. McLean, Dr. Spangler, Dr. Bethel, Dr. Carter, and Dr. Wolfe.

The Free Hospital for Poor Consumptives at White Haven, Pa., has just issued its annual report. During the year 540 patients were treated, with no deaths. The following officers were elected: President, Dr. L. F. Flick; vice-presidents, Louis Gerstley and M. S. Kemmerer; secretary, Charles W. Welsh; treasurer, Edward A. Millar; managers: James M. Wilcox, Frank Graham Thompson, Talcott Williams, Benjamin Wolf, Dr. Charles J. Hatfield, John K. Mitchell, 3rd, Dr. D. J. McCarthy, Dr. Joseph Walsh, Samuel Castner, Jr., and Dr. William B. Stanton.

The Annual Meeting of the Pennsylvania State Veterinary Medical Association was held in Philadelphia on March 6th and 7th. Papers were read by Dr. Leonard Pearson, Dr. W. Horace Hoskins, Dr. I. Earl Budd, Dr. J. C. Newhard, Dr. E. S. Deubler, Dr. W. L. Williams, Dr. U. S. G. Beiber, Dr. Henry T. Jarrett, Dr. John W. Adams, and Dr. C. J. Marshall. The following officers were elected for the ensuing year: President, F. F. Hoffman, Brookville, Pa.; vice-presidents, H. B. Cox, Philadelphia; N. H. Allis, Wyalusing; and H. S. Jackson, Senickby; treasurer, R. Francis, Philadelphia; trustees, Leonard Pearson, Philadelphia; Otto G. Noack, Reading; W. H. Hoskins, Philadelphia; Jacob Helmer, Scranton; and William L. Rhoades, Lansdowne.

Mosquito Extermination.—A bill has been introduced into the Senate of New Jersey appropriating \$70,000 per annum for five years for the purpose of exterminating the mosquitoes in the New Jersey marshes. A delegation composed of Dr. Edward B. Voorhees, director of the New Jersey Agricultural College Experiment Station; Edward D. Duffield, of South Orange, Assistant Attorney General of New Jersey; Peter Shields, president of the Cape May Real Estate Company; Mayor Stoy, of Atlantic City; Recorder John W. Thompson, of Cape May; Mayor William Butler and R. F. Engle, of Beach Haven; Spencer Miller, of South Orange; Dr. T. N. Gray, of East Orange; Louis J. Richards, of Elizabeth; Eugene Winship, of North Long Branch; and N. H. Brehme, of the Conference Committee on Mosquito Extermination, spoke in favor of the bill at a meeting of the Senate Committee on Agriculture.

The Widener Memorial Home for Crippled Children, at York Road and Olney Avenue, was opened on Saturday, March 3rd. The institution was founded by Mr. Peter A. B. Widener as a memorial to his wife. Children suffering from deformities and between the ages of 6 and 16 years will be received in the institution, where they will be taught truck farming, market gardening, poultry raising, horticulture, sewing, cooking, housework, dressmaking, millinery, stenography, telegraphy, carving, tailoring, basket making, shoemaking, printing, silver engraving, draughting, designing, etc. The plan of the school includes a complete hospital department in which modern orthopaedic methods will be employed for the correction of the deformities, after which the patients will be transferred to the industrial department, where their education will begin. The buildings, grounds, etc., will cost \$2,000,000, and Mr. Widener has endowed the home with \$3,000,000 for maintenance. Dr. De Forest Willard, who is in charge of the hospital department, Mayor Weaver, and Col. A. K. McClure made addresses at the dedicatory exercises.

Philadelphia Bureau of Health Statistics.—During February the Division of Medical Inspection made 10,664 in-

spections exclusive of schools and ordered 2,565 fumigations. Thirty-six cases were referred for special diagnosis; 4,991 visits were made to schools and 1,064 children were excluded; 259 cultures were taken; 202 injections of antitoxine were given, and 188 persons were vaccinated. In the Division of Vital Statistics 2,483 deaths were reported, 2,687 births were recorded, and 1,260 marriages were registered. In the Division of Milk Inspection 4,904 inspections were made of 102,182 quarts of milk, of which 347 quarts were condemned. Eight samples were subjected to chemical examination and 710 to microscopic examination. In the Division of Meat and Cattle Inspection 2,414 sanitary inspections were made, of which 141 were found unsanitary; 2,414 inspections of dressed meat were made, with 43 condemnations; 71,274 stock yard inspections were made of which 83 were condemned; and 1,608 postmortem examinations were made with 30 condemnations. In the Division of Disinfection 195 fumigations were done for scarlet fever, 362 for diphtheria, 236 for typhoid fever, 181 for tuberculosis, and 195 for miscellaneous diseases. Fifty-one schools were fumigated. In the Bacteriological Laboratory 1,180 cultures were examined for diphtheria; 871 examinations were made for the serum diagnosis of typhoid fever; 691 specimens of milk and 156 specimens of sputum were examined; and 2,951,500 units of antitoxine were supplied. In the Chemical Laboratory 112 analyses were made.

Charitable Bequests.—The employees of the Bell Telephone Company, of Philadelphia, have raised a fund which will be donated to some hospital for the purpose of endowing a bed in memory of Theodore Spencer, vice-president and general manager of the company, who died recently.

By the will of Robert S. Woodruff, who died recently in Trenton, N. J., St. Francis Hospital, of Trenton, receives \$2,000; Mercer Hospital, of Trenton, receives \$1,000; and McKinley Hospital, of Trenton, receives \$500.

The teachers of the Philadelphia public schools have raised a fund of \$5,000 which will be donated to a hospital to found the Lewis Elkin Memorial Bed for sick or injured teachers of either sex.

By the will of E. T. Dobbins, who died recently at the Hospital of the University of Pennsylvania, the following charitable bequests are made: Home for the Aged of St. Luke's Church, \$1,000; Woman's Medical College, to endow a free bed, \$3,000; Woman's Medical College, to pay the tuition for the regular course of instruction in medicine of a young woman who can pass the necessary examination, preference being given to a graduate trained nurse, \$3,000; Burlington County Hospital, \$5,000; Bethesda Home, \$10,000; Southern Home for Destitute Children, \$10,000; House of Rest, \$5,000; Hayes Mechanic's Home, \$10,000; Home for Aged and Infirm Colored Persons, \$5,000; Children's Hospital, \$5,000; Home for Destitute Colored Children, \$5,000; Home for Incurables, \$5,000; to maintain a scholarship at the Philadelphia College of Pharmacy to be conferred upon a New Jersey apprentice passing the highest preliminary examination, \$2,500; Hospital of the Woman's Medical College, \$10,000. The Dobbins homestead, at Mount Holly, N. J., is directed to be conveyed to the Children's Home, to be known as the Mary A. Dobbins House of the Burlington County Children's Home.

The Health of Philadelphia.—During the week ending March 10, 1906, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever.....	231	35
Scarlet fever.....	49	1
Chick-pox.....	53	0
Diphtheria.....	77	16
Measles.....	639	12
Whooping cough.....	37	7
Tuberculosis of the lungs.....	175	76
Pneumonia.....	157	93
Erysipelas.....	17	2
Puerperal fever.....	3	0
Tetanus.....	1	0
Mumps.....	28	1
Cancer.....	12	13

The following deaths were reported from other transmissible diseases: Cerebrospinal meningitis, 1; tuberculosis, other than tuberculosis of the lungs, 14; dysentery, 1; diarrhoea and enteritis, under two years of age, 28. The total deaths numbered 634, in an estimated population of 1,469,126, corresponding to an annual death rate of 22.44 in 1,000 population. The infant mortality was 161; under one year of age, 118; between one and two years of age, 43.

There were 31 still births, 15 males and 16 females. The temperatures were moderate.

BOSTON AND NEW ENGLAND.

The Boston Medical Library Society held a meeting at the library in conjunction with the Suffolk District Branch of the Massachusetts Medical Society, on Wednesday, March 14th, Dr. George H. Monks in the chair. Dr. David W. Cheever and Dr. Charles A. Porter spoke on the older methods of the Treatment of Tetanus and on the Serum Treatment. Dr. Joseph A. Blake, of New York, spoke on the use of Magnesium Sulphate in the production of Anæsthesia and in the treatment of tetanus. The papers were discussed by Dr. W. B. Cannon and Dr. L. J. Henderson.

The Mortality of Connecticut.—According to the State Board of Health's *Monthly Bulletin* for February, 1906, the total number of deaths during the month was 1,225. This was 114 less than in January, and 143 less than in February of last year, and 87 less than the average number of deaths during February for the five years preceding. The death rate was 14.6 for the large towns, for the small towns 15.6, and for the whole State 14.8. The deaths reported from infectious diseases were 179, being 14.6 per cent. of the total mortality.

The New Hampshire Surgical Club.—The following programme was arranged for the semi annual meeting held at Nashua, on Thursday, March 22nd: Prostatic Calculi, by Dr. A. W. Mitchell, of Epping; Generalized Cancer of the Peritonæum, by Dr. J. M. Gile, of Hampton; Treatment of Strangulated Hernia, by Dr. E. F. McQuestern, of Nashua. The officers of the club are: President, Dr. William T. Smith, of Hanover; vice-president, Dr. Frank Blaisdell, of Goffstown; secretary and treasurer, Dr. N. W. McMurphy, of Gilmanton; executive committee: Dr. W. T. Smith, Dr. N. W. McMurphy, Dr. T. W. Luce, Portsmouth; Dr. M. S. Woodman, West Lebanon; Dr. F. E. Kittridge, Nashua.

The Connecticut State Board of Health.—A few days before his death, which occurred on March 9, 1906, the late Secretary, Dr. Charles A. Lindsley, dictated the following letter, which shows that his interest in his work endured to the end: "At a quarterly meeting of the State Board of Health, held at the secretary's office in New Haven July 7th, it was voted by the board to remove its secretary's office to Hartford. At the next quarterly meeting, held October 20th, I presented my resignation to take effect at the pleasure of the board, after the completion of the annual report. At a special meeting held November 22nd, Dr. J. H. Townsend, of New Haven, was elected my successor, my resignation to take effect April 1st, after which date all communications to the board must be addressed to Dr. J. H. Townsend, secretary, Rooms 85 and 87 State Capitol, Hartford. I desire to express my sincere thanks and grateful appreciation for the hearty cooperation and cheerful assistance of all those who have helped to broaden and extend the work of the board to its present limits. I beg you all to give my successor the same valuable assistance you have given me and so bid you farewell. Yours sincerely, C. A. Lindsley, secretary."

BALTIMORE AND THE SOUTH.

Personal.—After May 1, 1906, the address of Dr. William Lee Howard will be changed from Baltimore to Mossfell, Westboro, Massachusetts.

The Missouri State Medical Examining Board.—An examination for a license to practise medicine and surgery will be held at St. Louis, on Tuesday, Wednesday, and Thursday, April 10, 11, and 12, 1906, at the Barnes Medical College. An examination for midwives will also be held at the University Medical College, Kansas City, Mo., on Monday, Tuesday, and Wednesday, April 16th, 17th, and 18th. Midwives will be examined on the 18th. The whole board will meet in Kansas City, at the Midland Hotel, on May 1, 1906, to pass upon the grades made by the applicants in these examinations.

The Providence Hospital, Washington, D. C.—Sister Elizabeth, who for the past four years has been in charge of this hospital, has been transferred to St. Joseph's Hospital, Philadelphia, as Sister Superior, in place of Sister Raphael, lately sent to Panama to establish a hospital there. Under Sister Elizabeth's management the improvement and enlargements of Providence Hospital were completed, making it one of the best equipped institutions of its kind in the country. Before going to Washington Sister Elizabeth was

for many years stationed in the hospital under the sisters of charity in Chicago.

Removal of the Davidson (N. C.) Medical College.—This college, heretofore an adjunct of the Davidson College, is to be moved to Charlotte, N. C., and established as an independent institution. The trustees of the college have purchased a large lot in the centre of the city, and work will shortly begin on the erection of a three-story building, in which the college will be domiciled. It is expected that the building will be ready for the opening of the college as an independent institution, next autumn. The trustees have not revealed their plans for the future beyond what is stated. The announcement is considered important, as it will be the State's first independent medical college.

CHICAGO AND THE WEST

The Wayne County (Mich.) Medical Society.—A meeting of the *Surgical Section* will be held at Detroit on Monday, March 26th, when the following programme will be presented: Dr. P. D. White will exhibit a Modified Photometer; Dr. Guy H. McFall will speak on Neuralgia Due to Sinus Disease; and Dr. Emil Amberg will read a paper on Ear Affections and Mental Disturbances.

Statement of Mortality in Chicago for the Week Ending March 10, 1906, compared with the preceding week, and with the corresponding week of 1905. Death rates computed on United States Census Bureau's figures of midyear populations—2,049,185 for 1906—1,990,750 for 1905:

	Mar. 10, 1906.	Mar. 3, 1906.	Mar. 11, 1905.
Total deaths, all causes.....	607	563	627
Annual death rate in 1,000.....	15.44	14.32	16.41
Sexes.....			
Males.....	354	318	364
Females.....	253	245	263
Ages.....			
Under 1 year of age.....	111	109	135
Between 1 and 5 years of age.....	41	49	70
Between 5 and 20 years of age.....	48	51	49
Between 20 and 60 years of age.....	271	234	261
Over 60 years of age.....	136	120	112
Important causes of death.....			
Apoplexy.....	13	15	13
Bright's disease.....	45	43	38
Bronchitis.....	26	15	30
Consumption.....	76	63	82
Cancer.....	22	21	19
Convulsions.....	16	9	19
Diphtheria.....	14	10	2
Heart diseases.....	46	32	45
Influenza.....	3	3	8
Intestinal diseases, acute.....	21	27	28
Measles.....	0	2	10
Nervous diseases.....	35	17	22
Pneumonia.....	93	111	138
Scarlet fever.....	13	11	1
Smallpox.....	0	0	8
Sulicide.....	7	9	8
Typhoid fever.....	7	8	8
Violence (other than sulicide).....	37	27	25
Whooping cough.....	1	3	6
All other causes.....	132	137	117

During the first ten days of the current month there were 793 deaths from all causes reported to the bureau of vital statistics—representing an annual mortality rate of 14.13 in a thousand of the population. The average March rate of the previous thirty years was 18.66 and that of the last decade was 16.04 in a thousand. The banner year for the most healthful March during the thirty years 1876-1905 was 1901, when the rate was only 13.11. Lack of sunshine during the week caused an increase of nearly 14 per cent. in deaths among chronic invalids and the old—those over 60 years of age. At the close of the week, however, health conditions were more favorable, except as to the scarlet fever outlook.

State of mortality in Chicago for the week ending March 17, 1906, compared with the preceding week and with the corresponding week of 1905. Death rates computed on United States Census Bureau's midyear populations—2,049,185 for 1906, 1,990,750 for 1905:

	Mar. 17, 1906.	Mar. 10, 1906.	Mar. 18, 1905.
Total deaths, all causes.....	555	607	557
Annual death rate in 1,000.....	14.10	15.44	14.57
Sexes.....			
Males.....	312	354	324
Females.....	243	253	233
Under 1 year of age.....	137	111	133
Between 1 and 5 years of age.....	36	41	51
Between 5 and 20 years of age.....	35	48	37
Between 20 and 60 years of age.....	236	271	238
Over 60 years of age.....	111	136	98
Important causes of death.....			
Apoplexy.....	18	13	15

Diphtheria.....	9	14	11
Heart diseases.....	39	46	42
Intestinal diseases, acute.....	30	21	27
Measles.....	1	0	8
Nervous diseases.....	24	35	17
Scarlet fever.....	13	11	1
Smallpox.....	0	0	8
Sulicide.....	7	9	8
Typhoid fever.....	7	8	8
Violence (other than sulicide).....	26	37	20
Whooping cough.....	1	3	6
All other causes.....	132	137	117

While there is much sickness in the community, as a result of the unseasonably severe weather of the week, it is generally of a mild character and, except for the influenzal affections, does not seriously menace the public health. Most of the contagious and infectious diseases show fewer cases reported than during the previous week—measles and chickenpox being the only exceptions.

GENERAL

The Russian Blue Cross Society of Solicitude.—We are requested to publish the following: "Owing to recent events in Russia, which have left many thousand unfortunate victims of war and riot, the Russian Blue Cross, a great philanthropic organization under the high patronage of Her Imperial Highness the Grand Duchess Elizabeth Mavrikiyevna, which looks after the interests of sick and destitute children of all creeds and nationalities throughout the empire, has been overwhelmed with calls upon it. To meet the emergency the society has extended the scope of its work and is sending special representatives abroad. Realizing the deep interest felt among Americans for Russian unfortunates, the society has delegated Mr. Boris Klebanoff as its special representative to America. Mr. Klebanoff has already arrived in New York and has opened offices for the society in the Hudson Building, at No. 32 Broadway. The Blue Cross is in no sense a rival of the Red Cross. The latter looks after the war's physically afflicted. The Blue Cross assists the helpless young victims of war, revolution, famine, or unfortunate social circumstances. It maintains refuges, asylums, training schools, work farms, hospitals, and kindergartens. Founded in 1882, it has grown to an enormous scope, enjoys the patronage of the royal family and leading personages in official and business life throughout Russia. It has an endowment fund of one million roubles and receives such support from all sources in commercial life that it is practically the national charity. Some of its unique methods for raising funds may be introduced to the American public by Mr. Klebanoff."

The American Gastroenterological Association will hold its ninth annual meeting at Boston, on Monday and Tuesday, June 4 and 5, 1906. Following is the preliminary programme: President's address: The Mutual Obligations of the Surgeons and Internists in the Proper Development of Gastric Surgery, by Dr. H. W. Bettmann, Cincinnati; Remarks on Bauh's Disease, by Dr. Max Einhorn, New York; Demonstration of Gastric and Intestinal Movements, by Dr. W. B. Cannon, Boston; The Kidney in Gastroenterology, by Dr. A. L. Benedict, Buffalo; Paper, by Dr. Franklin W. White, Boston; A Further Consideration of the Gastrointestinal Disturbances Associated with Migraine, by Dr. J. A. Lichty, Pittsburgh; Hypersecretion, Associated with Cirrhosis of the Liver, by Dr. H. F. Hewes, Boston; On the Influence of Rest, Exercise and Sleep on Gastric Digestion, by Dr. Julius Friedenwald, Baltimore; A Case of Hyperplastic Colitis; Extirpation of the Entire Colon, the Upper Portion of the Sigmoid Flexure, and Four Inches of the Ileum, by Dr. Morris Manges, New York; A Case of Pyloric Stenosis in a Child of Five Years, by Dr. S. W. Lambert, New York; Recent Studies in the Diagnosis of Gastric Ulcer, by Dr. J. C. Hennmeter, Baltimore; Gastric Ulcer in Childhood, by Dr. Harry Adler, New York; Further Remarks on the Treatment of Chronic Round Ulcer of the Stomach, by Dr. F. H. Murdoch, Pittsburgh; Spontaneous Rupture of the Colon from Violent Peristalsis, with Report of Fatal Case, by Dr. G. W. McCaskey, Ft. Wayne; Habitual Constipation Viewed from the Standpoint of Modern Evolution of Dietetics is a Physiological Phenomenon, by Dr. C. D. Spivak, Denver.

Pith of Current Literature.

AMERICAN MEDICINE.

March 17, 1906.

1. Without Mosquitoes There Can be No Yellow Fever,
By JAMES CARROLL.
By PALMER FINDLEY.
2. Gonorrhœa in Women,
3. Foreign Bodies in the Bronchi,
By THOMAS A. CLAYTON.
4. Actinomycosis Limited to the Urinary Tract,
By E. MACD. STANTON.
5. Pyæmia, with the Report of an Interesting Case in
Which the Autopsy Revealed Toxæmia Rather than
Pyæmia,
By DAVID C. PEYTON.
6. Hand Disinfection,
By C. P. OBENDORF.

1. **Without Mosquitoes There Can Be No Yellow Fever.**—Carroll says that the logical conclusions derived from investigations which have been made would seem to be that the parasite of yellow fever belongs to the animal kingdom because: (1) It is absolutely necessary for its continued existence that it pass alternately through man and the mosquito, and its parasitic existence in these hosts is obligatory. (2) The fact that a period of about two weeks must elapse before the contaminated mosquito is capable of infecting, points to a definite cycle of development in that insect. (3) The limitation of its development cycle to mosquitoes of a single genus, and to a single vertebrate, conforms to a natural zoological law and does not agree with our present knowledge of the life history of bacteria. (4) The effects of climate and temperature upon *Stegomyia* and upon the rate of development of yellow fever parasite within the body of the insect are exactly the same as the effects of the same conditions upon the anopheles mosquito and the malarial parasite. That yellow fever is noncontagious has been proved. There should be therefore a war against mosquitoes.

2. **Gonorrhœa in Women.**—Findley says that a diagnosis of gonorrhœa, which is absolutely certain, can only be made by the detection of the gonococcus in the tissues. This is very often not easy, as the gonococcus is of small size. Grave mistakes have been made in diagnosing by assuming that no infection exists because the usual complaints of an acute infection are not given by the patient. Since the cure of gonorrhœa is so unsatisfactory, and when deeply seated is usually only accomplished by a mutilating operation which too often unsexes the woman, prophylaxis becomes the paramount issue in the management of gonorrhœa of women. Unfortunately, it is not alone the laity which is in need of education in this respect; the profession is often guilty of being too hasty in pronouncing a cure and in giving sanction to marriage and to the resumption of the marital relation. Untimely interference with uterine and urethral applications in the early stage of the disease too often causes an extension of the infection and makes a serious lesion of what might otherwise have been a self limiting disease. A man should not marry until repeated, thorough bacteriological examinations have demonstrated the entire absence of gonococci. And when the wife is infected, pregnancy should be interdicted until a cure is effected. The author closes his article with a review of the treatment.

THE BOSTON MEDICAL AND SURGICAL JOURNAL

March 15, 1906.

1. Adenomyoma of the Uterus. A Report of Four Cases,
By W. P. GRAVES.
2. Bilateral Torsion of the Fallopian Tubes,
By MALCOM STORER.
3. The Open Air Treatment of Tuberculosis,
By WALTER A. GRIFFIN.
4. The Successful Treatment of Tuberculosis,
By ALBERT E. ROGERS.

1. **Adenomyoma of the Uterus. A Report of Four Cases.**—Graves thinks that the occurrence of four

adenomyomata in a total of one hundred myomatous uteri is unusual, it may be a mere coincidence, besides the total number of cases examined is too small a figure upon which to base an authentic proportion. Of three of these cases the author calls the attention to the similarity with the adenomyomata described by von Recklinhausen in deriving their origin from Wolfian rest. In all three cases there occurred in connection with the presence of adenomyomata, well marked developmental defects of some part of the pelvic organs. The fourth tumor seems to have derived its histogenesis from the endometrium.

2. **Bilateral Torsion of the Fallopian Tubes.**—Stover reports a case of bilateral torsion of the Fallopian tubes with a one sided strangulation. The only treatment of this accident is immediate operation. The author removed the outer portion of the left tube, made a new ostium in it, and anchored the stump in such a position that torsion could not recur, while he amputated the right tube, leaving the ovary. Recovery was uneventful and permanent. Of sixty-two cases reported in the literature, there were only two deaths, one from carcinoma of the ileus and the second from unknown causes (hæmatosalpinx).

4. **The Successful Treatment of Tuberculosis.**—Rogers describes his treatment of tuberculosis. The patient has to live in the open air, if possible in a tent or shack near his home. He is to be instructed as to the care of his sputum; special dishes reserved for his use are boiled once a day. His mouth is to be frequently rinsed with boric acid solution and his face and hands kept scrupulously clean. If he has had a hæmorrhage he receives ten grains of calcium chloride, in a teaspoonful of water, with each meal; this is continued for a long time, usually several months. The author is very much in favor of raw eggs and milk added to the diet of an emulsion of mixed fats which was invented by Dr. Russell, and contains beef fat, cacaoanut, peanut, olive oils, and a small quantity of clove oil. Rogers cites nine cases, every patient gaining in weight.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 17, 1906.

1. The Possible Causes of Emaciation Not Generally Recognized,
By RICHARD C. CABOT.
2. The General Conditions Associated with Insanity.
Their Connotations and Certain Deductions as to their Significance,
By H. A. TOMLINSON.
3. Autolysis (*To be concluded*),
By T. A. LEVENE.
4. Irrigation of the Abdominal Cavity. From a Bacteriological Standpoint,
By T. WALTER VAUGHAN.
5. The Conservative Surgery of the Tubes and Ovaries,
By ANDREW STEWART LOBINGIER.
6. The Value of Alcohol in Carbolic Acid Poisoning. A Clinical Experimental Study,
By THOMAS WOOD CLARKE and EDGAR D. BROWN.
7. Tests for Acetone in the Urine,
By ALONZO ENGLEBERT TAYLOR.
8. The Treatment of Abortion,
By H. J. BOLDT.

1. **Two Possible Causes of Emaciation Not Generally Recognized.**—Cabot writes that loss of weight, gradual or fairly rapid, is often observed as a part of the aging process in persons past middle life. This emaciation is often associated with arteriosclerosis, possibly as a result of it, possibly as the concomitant effect of some third factor, so far unknown. The rapid gain in weight often seen in growing children and in the convalescence from wasting diseases is not directly a result of abundant food, and may occur, even when the food supply is far below normal. This gain must be referred to an extraordinarily rapid cell production due primarily to heightened growth energy in the cells themselves. That influences connected with the organs of sex may exert a controlling force on nutrition is strongly suggested by the changes in flesh and figure following parturition and the menopause. The impor-

tance of internal secretions in the maintenance or perversion of nutrition is exemplified in the emaciation of Graves's disease, the increased weight of the myxœdematous, and perhaps in the more local hypertrophies of acromegaly and Paget's disease. The possibly decisive influence of insomnia on weight is suggested by the rapid emaciation sometimes occurring in cases of aneurysm when sleep is prevented by pain, although the appetite remains.

2. The General Conditions Associated with Insanity.—Tomlinson states that there cannot be special change in an organ without general disease in the rest of the organism, and in the study and treatment of the special condition the general involvement and its extent are the most important. In dealing, therefore, with insanity manifestations we are concerned with the cerebral potentiality of the individual in considering its nature; with heredity and environment in determining its form and sequence; while the evidence of the involvement of the general organism in the degenerative process must be our guide in anticipating its progress and termination.

4. Irrigation of the Abdominal Cavity. From a Bacteriological Standpoint.—Vaughan is of the opinion that the habit of irrigation in infectious conditions of the peritonæum is a pernicious one, absolutely without either scientific or clinical endorsement, and one which appears to be as difficult for the general surgeon to give up as anterior suspension or fixation has been for some gynecologists. Many of the leading surgeons have abandoned irrigations in peritonitis from appendical trouble, it is true, and their results alone should cause others to follow in their steps. Why should the same principle not be adopted in typhoid perforation, and indeed, perforations from all other causes? The author believes that if such a course were adopted the present mortality would be markedly reduced.

5. The Conservative Surgery of the Tubes and Ovaries.—Lobingier advocates in this paper the conservative method of surgery. He says that partly on account of the involved pathology the ovary has frequently been sacrificed with the diseased tube. This practice has doubtless grown from the fallacy that if the tube be partially or hopelessly destroyed the ovary is likewise in a hopeless condition and should be removed also. No more pernicious doctrine than this could prevail. The technics in tubal surgery must depend largely on the character and degree of infection and the extent of destruction and deformity. The results of value in certain procedures are the end results. There are no more positive or beneficial results than in this field, provided careful judgment and attention to minute detail is faithfully observed.

6. The Value of Alcohol in Carbolic Acid Poisoning.—Clarke and Brown from experiments given in detail draw the conclusion that: Alcohol has a local antidotal effect in carbolic acid burns, due to its solvent action. There is no evidence of chemical antagonism between alcohol and phenol, and there is no effect produced by alcohol in carbolic acid poisoning after the latter has been absorbed into the system. Alcohol and phenol placed in the stomach give no different results from phenol alone, while lavage with alcohol is effected when the phenol is in the stomach, but its superiority over lavage with water is pronounced. From the clinical aspect it appears that alcohol has a local antagonism to carbolic acid. The procedure recommended is immediate, abundant lavage with 10 per cent. alcohol, to be followed by lavage with plain water and stimulation with strychnine and digitaline, eggs and milk with magnesium phosphate. The point to be borne in mind is that alcohol is not effective after the carbolic acid has been absorbed, and to be of value must be used while the poison is still in the stomach.

7. Tests for Acetone in the Urine.—Taylor says that if acetone is to be tested for in the urine it should be done with the tests of Stock and of Denigès. Both are certain in their results and easy of execution, and should replace the fallacious tests with Lugol's solution, mercuric oxid and sodium nitroprussic. In the Stock's test a distillate of the urine, made acid by a few drops of either acetic, hydrochloric, or sulphuric acids, is to be used. To this is added in succession, in certain quantities, hydroxylamin hydrochlorid, sodium hydroxid, pyridine, ether, bromine water, until the ether layer becomes yellow, when hydrogen peroxid is added; if acetone is present the ether will turn green blue. Denigès adds to distilled urine the same amount of mercury subsulphate. A white crystalline precipitation occurs on cooling, which is less well given if acetone is present.

MEDICAL RECORD.

March 17, 1906.

1. The Border Line in Medicine and Surgery, By E. G. JANEWAY.
2. Fever in Tertiary Syphilis, By DUDLEY N. CARPENTER.
3. A More Liberal Diet in Typhoid Fever, By THOMAS A. CLAYTOR.
4. The Curability of Tuberculosis, By HENRY F. LANGHORST.
5. The Conservative Treatment of Urethral Stricture, By G. MORGAN MUREN.
6. The Schwartz-Starke Operation in Chronic Suppurative Otitis Media, By J. J. THOMSON.
7. Displacement of the Fallopian Tubes to Produce Sterility, By A. E. ROCKEY.
8. Biographical Sketch of Michaelis, the Pioneer Worker on Nerve Regeneration, By PIERCE CLARK.

1. The Border Line in Medicine and Surgery.—Not a few cases of disease, says Janeway, occupy that debatable ground which may be called the border line of medicine and surgery. In dealing with cases belonging to this class an accurate diagnosis should be obtained as nearly as possible before resorting to surgery. The author asks: Are certain palliative operations of such value to the patient as to be inevitably seriously recommended? Assumed that the primary disease cannot be removed and that death in time is inevitable, is it worth while to recommend such operations as the production of a gastric fistula in cancer of the œsophagus or an artificial anus in an inoperable cancer of the rectum not markedly obstructive? Janeway states that he does not feel inclined to urge the patient to dubious palliation, and he believes that it is best to take council with the family or near friends of the patient upon this subject, placing the matter candidly before them; and if they decide against attempts at surgical palliation he does not consider that they have acted very unwisely.

2. Fever in Tertiary Syphilis.—Carpenter wishes to illustrate the theory, recently advocated by the *Lancet*, that the difficulty in diagnosis of fever in tertiary syphilis is quite eminent. He cites two cases which are not only of interest in this question, but the results of the operative treatment indicate also a possible cause for this hectic fever. He observed that both patients improved more rapidly when the iodide alone was used instead of following the old rule, mercury cures and potassium iodide relieves.

3. A More Liberal Diet in Typhoid Fever.—Claytor advocates a more liberal diet in typhoid fever. It has been his custom to begin the treatment of a case of typhoid fever, no matter on what day of the disease it may come under his care, with the regulation six ounces of milk every two hours, night and day, while awake. Animal broths are given in place of milk, to vary the monotony. Each day after the subsidence of the more acute symptoms, the patient is asked if he is hungry, and upon an affirmative answer a soft boiled or poached egg is allowed, and if well borne, the number is grad-

ually increased to three or more a day. The next additions are jelly, custard, soft toast, soft parts of a baked apple, or well boiled rice. The last to be tried are scraped beef or chop, chicken and baked potato. Certainly each case should be studied individually. Thus, he nursed twenty-six patients, all recovering. In five cases one or more hæmorrhages occurred.

4. **The Curability of Tuberculosis.**—Langhorst describes seven cases of tuberculosis which have been under his care for the past five years. The results he obtained were favorable. Fresh air and sunlight, milk, cream, eggs, rice, and other easily assimilated foods, creosote carbonate, calcium hypophosphate, were the general treatment. But the keynote of success in the treatment of tuberculosis is an early diagnosis.

5. **The Conservative Treatment of Urethral Stricture.**—Muren is in favor of treating unyielding strictures of the urethra by gradual dilatation as against external or internal urethrotomy.

7. **Displacement of the Fallopian Tubes to Produce Sterility.**—Rockey reports five cases illustrating the justifiability to produce sterility. There are conditions in which the possible occurrence of pregnancy would expose the patient to danger which it is most desirable to avoid. As ordinary measures unhesitatingly and very properly recommended under such circumstances are not infallible, a method of safely and positively insuring sterility should have, in the author's opinion, a proper place in gynecological surgery. The method he proposes is the displacement of the uterine end of the Fallopian tubes. It may be done either through anterior vaginal or a very short suprapubic incision. He describes his technics as follows: When the cornu of the uterus is brought into the field of incision, the tube should be seized near its uterine end with the forceps. The sharp point of the scissors is thrust into the cornu, and the uterine end of the tube is cut out by a V shaped incision. The wedge shaped point of the excised end of the tube is then cut off so that the severed end of the tube will slip into the peritoneal sheath and be completely covered by it. Through this cuff is then passed one catgut stitch, then through the fundus posterior to the inner end of the V shaped incision from behind forward, and is tied, thus fastening the closed end of the tube back of its original position. Two more stitches are passed around the tube and through the cornu to close the V. The tube is fastened to the outside of the closed cornu.

BRITISH MEDICAL JOURNAL.

March 3, 1906.

1. Recent Surgical Methods in the Treatment of Certain Forms of Paralysis, By A. H. TUBBY.
2. A Case of Myxœdema, By Sir T. FRASER.
3. The Borderland of Insanity, By G. H. SAVAGE.
4. Neurasthenia, Degeneracy, and Mobile Organs, By P. C. SMITH.
5. The Pathology of Epilepsy, By J. TURNER.

1. **Surgical Treatment of Paralysis.**—Tubby, in his Hunterian lecture, discusses tendon and muscle transplantation, arthrodesis, and nerve anastomosis. By tendon transplantation is meant the reinforcement of a paralyzed muscle by attaching to its tendon either a part or the whole of a tendon of a healthy muscle. As a preliminary it is essential that all secondary deformities be corrected. The reinforcing muscles or tendons are as far as possible to be taken from synergic muscles. A reinforcing tendon should not be bent round at an angle. As a rule opponents of the paralyzed muscle are not to be selected, because if that is done the action of the reinforcing muscle is neutralized. Lastly, cases of extensive paralysis are totally unfit for any form of this operation. In the treatment of the results of infantile paralysis, most of the tendon grafting work has been done on the foot. The best results have been obtained in the removal of talipes varus and

valgus. In talipes equinus better results are obtained by section of the tendo Achillis than by grafting. On patients affected with infantile and traumatic paralyzes in the upper extremity the amount of operative work performed has not been so great. Spastic paraplegia, and cerebral diplegia have been attacked by surgeons, but not so much can be expected from tendon transplantation as in infantile and other forms of paralysis. But simple tenotomies and tendon lengthening, provided the position of the limb is guarded for a time, result in benefit. In all these cases an immense amount of after education is necessary. In estimating the success of these operations it is necessary to consider how far an apparently paralyzed muscle is capable of recovery if aided by removing the harmful effects of constant stretching, and by reinforcing its tendon. Looking at the question of tendon transplantation as a whole, much more successful results are obtained by insertion into the periosteum of reinforcing tendons than by anastomosis. Among the causes of want of success are: (a) Too great expectations; (b) failure to correct secondary deformities; (c) deficiencies in technique, and defects in asepsis; (d) cicatrization at the point of division of the tendon slip; (e) yielding of the new attachment of the tendon; and (f) not keeping the part immobile sufficiently long after the operation. Arthrodesis finds its place in the treatment of infantile paralysis when a joint is hopelessly flail like, and it has the effect of making the part stable, lessening the amount and weight of apparatus, and affording a position of steadiness, as in the ankle, for the finer movements of the front part of the foot. Arthrodesis is not so suitable for the knee as for the ankle. Nerve anastomosis and transplantation are well within the range of operative therapeutics. It seems a bold procedure to cut a paralyzed nerve, and implant its peripheral end into a sound nerve, and a still bolder procedure to cut a slip from a healthy and important nerve. The chance of injuring a sound nerve must be carefully weighed. We must also know whether the muscle which has been again brought to life by this operation can learn to functionate independently. Great care should be taken to ascertain in any nerve the exact position of the nerve bundles supplying certain muscles and groups of muscles.

4. **Enteroptosis and Degeneracy.**—Smith states that various conditions characterized by laxity of attachments are frequently found in nervous subjects; among them may be mentioned floating kidney; gastric, hepatic, and general enteroptosis; mobile heart; uterine displacements; spinal curvature; genu valgum; and flat foot. Varicocele is to some extent a parallel condition. The particular neurosis that accompanies these conditions mentioned is neurasthenia minor, which itself is a syndrome of degeneracy and muscular hypotony. Another cause is a congenital tendency to the proliferation of connective tissue, such as is most strikingly seen in arthritics. The author also calls attention to a hitherto undescribed stigma of degeneracy, yet which is very common. It is the rotation of the last phalanx, or less often of the last two phalanges, of one or more fingers round their long axis, so that the dorsal surface is turned slightly away from or towards the neighboring fingers.

5. **Epilepsy.**—Turner holds the view that epilepsy is a disease occurring in persons with a defectively developed nervous system, associated with a morbid condition of the blood, whereby it shows a special tendency to intravascular clotting, and that the immediate cause of the fits is sudden stasis of the blood stream, resulting from the blocking of cerebral vessels by these intravascular clots. The following are the important changes found in the nerve cells: (a) A form indicative of imperfect development. (b) Retention of subcortical nerve cells. (c) Either an acute form of cell

change; or (d) groups of darkly stained shrunken cells. On the part of the vascular system they are: (e) Large numbers of blood plates in the blood. (f) Different forms of intravascular clotting. (g) Small cortical hæmorrhage. Taken together, that is the correlation of the defectively developed, and probably unstable nerve cells, with the local stasis of the blood stream, resulting from intravascular clotting; these conditions constitute the pathological basis of the epileptic fit.

LANCET

March 3, 1906

1. Epidemic Diseases in England. The Evidence of Variability and of Persistence in Type. (Milroy Lectures, I), By W. H. HAMER.
2. Gastric Surgery (Hunterian Lectures, III), By H. J. PATERSON.
3. Two Cases of Bullet Wound of the Brain, By R. L. KNAGGS.
4. The Diagnosis and Treatment of Tuberculous Pleurisy, By S. MARTIN.
5. A New Method for the Production of Ultraviolet Rays and Other Rays by Low Tension, High Frequency Currents, By J. C. BOWIE.
6. Some Points in the Prognosis and Treatment of Croupous Pneumonia, By C. H. CATTLE.
7. The Psychology of the Tuberculous, By A. S. GUBB.

2. **Gastric Surgery.**—Paterson, in his third Hunterian lecture, states that the performance of gastrojejunostomy in addition to suture of a perforated ulcer (1) improves the after condition of those who recover, but of greater importance; (2) lessens the risk in cases where a second perforation is undiscovered; (3) diminishes the risk of hæmatemesis after operation; (4) allows more efficient infolding of the ulcer in cases where it is in the pyloric third of the stomach; (5) promotes more rapid and certain healing of the line of suture and so lessens the risk of further leakage; and (6) permits earlier feeding, earlier administration, and more rapid action of purgatives, and so secures more efficient drainage of the peritoneal cavity. In infantile hypertrophic stenosis of the pylorus gastrojejunostomy is the best operation for the following reasons: 1. It is preferable to operate on normal than on morbid tissues. 2. Feeding can be commenced at once after gastrojejunostomy. 3. If the anterior operation be performed it can be completed within twenty-five minutes, which is little longer than the time required for pyloroplasty. 4. The incision need be no longer than that required for pyloroplasty; two and a half inches is quite sufficient. If the patient's shoulders be slightly raised there is no fear of protrusion of intestine.

4. **Tuberculous Pleurisy.**—Martin states that in primary tuberculous pleurisy the course of the disease is very varied, and an accurate prognosis in the acute stage of the disease is impossible. In many cases in the early acute stages no diagnosis as to the nature of pleurisy is possible. The diagnosis has to be made by a study of: 1. The mode of onset of the disease. 2. The course of the disease, including an examination of the fluid, poured out. In nearly all cases it is necessary to puncture the pleura for purposes of diagnosis, as the presence of effusion frequently gives rise to much difficulty in the diagnosis. The following points are of importance: (a) The pyrexia in tuberculous cases is frequently much more prolonged and, even in the absence of empyema, will last weeks or months. This persistence of fever in the absence of suppuration or other complication is a strong evidence of tuberculosis. (b) The effusion into the pleura, when once removed by paracentesis, tends in many cases to accumulate again, requiring the performance of paracentesis several times for the relief of symptoms. (c) The pleural fluid in tuberculous cases sometimes coagulates spontaneously; if, however, the disease has lasted some time or has become chronic, coagulation may be slight or absent. If the fluid is found to be sterile by cultivation

on ordinary media, the disease is tuberculous. The result of guinea pig inoculations is often positive. In some cases the development of peritonitis evidences the tuberculous nature of the case. 3. The after effects of the disease on the chest wall and lung. It is common for the disease to spread from the pleura to the lungs or to be associated with disease of the lungs. In many cases there is left behind great thickening of the pleura. The chief physical signs are well marked retraction of the side (chiefly the base) and a deficiency in the entrance of air. After a time the signs of dilatation of the bronchi may appear, even with every other evidence of physical well being. The main question of treatment apart from rest in bed and nursing is as to the removal of the fluid from the chest. Cases running a prolonged course are best treated by lying in the open air, properly wrapped up, and fed. Were this done more systematically, it would frequently prevent a second attack of tuberculosis, affecting the lung tissue, and leading to a very chronic illness or more immediately to death.

6. **Pneumonia.**—Cattle holds that the increased fatality of pneumonia of late years is partly due to the increased prevalence of influenza. Under two years the mortality is fifty per cent. From then to twenty years it is low, but after that it increases with each decade of life. The greatest incidence is between the third and fourth decades. There is an increasing tendency to secondary empyema. Preexisting cardiac disease and concomitant pericarditis are very serious complications. Pregnancy also increases the danger. Sudden cessation of a profuse expectoration, with no improvement in the general condition, is a very bad sign; also the expectoration of prune juice sputum or pure blood. Serum treatment of the disease has as yet won no firm place. The bowels should be well opened by a brisk purge at the beginning, later purgation may be dangerous. The food should be milk, well diluted with soda water or barley water. The pain in the side calls for relief, but opium should not be given until hot applications have been tried. For the delirium hyoscine may be given. The application of ice bags to the affected area often produces considerable benefit. The routine administration of alcohol is not necessary or advisable. Late in the disease strychnine should be given hypodermically, and also belladonna to stimulate the respiratory centre and to dry up the bronchial secretion. Oxygen should always be in readiness. The abstraction of blood in suitable cases is worthy of trial.

7. **Psychology of the Tuberculous.**—Gubb states that the psychological changes in tuberculosis are: (1) Changes of mental temperament presumably due to the action on the nervous system of the toxins elaborated by the tubercle bacillus; and (2) modifications of character due to mechanical interference with the cerebral functions secondary to the deposit of tubercle within or upon the brain. The characteristic feature of the general psychology of the tuberculous is instability, feverish activity followed by periods of intense depression.

LYON MEDICAL.

February 25, 1906.

The Use of Drainage in Laparotomies Performed for Gynæcological Reasons, By Dr. VIOLET.

Drainage in Laparotomies.—Violet enumerates the chief disadvantages produced by the use of drainage in these cases as: 1. In certain cases gauze drainage favors retention of fluid rather than assures its evacuation. 2. The removal of Mikulicz's drainage is painful and calls for a second anæsthesia. 3. Convalescence is retarded. 4. Fistulæ persist. Other bad results which have been met with are: 5. The formation of stercoral fistulæ. 6. Secondary hæmorrhage. 7. Embolism on removing the drain. 8. Postoperative occlusion. 9. Painful adhesions. 10. Ventral hernia in fifty per cent. of the cases drained by Mikulicz's method. 11. Second-

ary infection of the drained cavity and extension of the infection to the peritonæum when the adhesions are insufficient to completely exclude the cavity.

PRESSE MEDICALE.

February 17, 1906.

1. The So Called Symptoms of Hysterical Hemiplegia,
By J. INGEGNIEROS.
2. Strangulation of the Ileum and of the Right Tube in
an Abnormal Pouch in the Pelvic Peritonæum,
By CH. SOULIGOUX and A. LAPOINTE.
3. Deep Injections in the Treatment of Obstinate Facial
Neuralgia,
By FERNAND LEVY and ALPHONSE BAUDOUIN.

1. **The So Called Symptoms of Hysterical Hemiplegia.**—Ingenieros reports a case of hysterical hemiplegia in which the symptoms characteristic of organic hemiplegia were present so that it could not be diagnosed in the manner proposed by Babinski through the absence of certain symptoms. The patient was cured by simple psychotherapeutical treatment.

2. **Strangulation of the Intestine in an Abnormal Peritoneal Pouch.**—Souligoux and Lapointe report the case of a young woman who was operated on for intestinal obstruction. A loop of the ileum was found to have become caught in a deep pouch in the peritonæum of the pelvis beneath the posterior fold of the broad ligament together with the right Fallopian tube, and had become strangulated. As the strangulated portion of the intestine had perforated a portion, ten centimetres long was resected and its continuity restored by a laterolateral anastomosis, but the patient died fourteen days after the operation.

3. **Deep Injections in the Treatment of Obstinate Facial Neuralgia.**—Levy and Baudouin report that they have secured good results from this rather old method of treatment.

February 21, 1906.

1. Retroversion of the Uterus, By Professor LE DENTU.
2. Dangers Attending the Ingestion of Tubercle Bacilli
Which Have Been Killed by Heat,
By A. CALMETTE and M. BRETON.
3. Motor Reeducation in Ataxia, By ALFRED MARTINET.
4. The Frequency of Infectious Diseases with Reference
to their Stages, By R. ROMME.

1. **Retroversion of the Uterus.**—Le Dentu describes retroversion of this organ and the various operations which have been employed for its correction.

2. **Dangers Which Attend the Ingestion of Dead Tubercle Bacilli.**—Calmette and Breton find that the repeated ingestion of small quantities of tubercle bacilli which have been killed by heat, administered experimentally, hasten death in the same way as repeated injections of small doses of tuberculin, and from their observations they draw the conclusion that such ingestion of tuberculous products sterilized by heat is very dangerous in tuberculous subjects and not without an element of danger to those who have not the disease. Hence milk from cattle even suspected of tuberculosis should not be drunk by tuberculous patients even after a thorough sterilization.

3. **Motor Reeducation in Ataxia.**—Martinet reproduces the exercises for the limbs and other parts of the body advocated by Dana, of the Cornell University Medical College, for cases of tabes dorsalis with ataxia.

February 24, 1906.

1. Five Years of Antityphoid Serum Therapy,
By Professor A. CHANTEMESSE.
2. Serious Burns Caused by the Explosion of a Barium
Acetate Heater (Chaufferette),
By F. DE LAPERSONNE.
3. Injections of Alcohol at the Level of the Foramina in
the Base of the Skull in Obstinate Facial Neuralgia.
A Reply to Levy and Baudouin, By F. OSTWALT.

1. **Five Years of Antityphoid Serum Therapy.**—Chantemesse shows by statistics that the general mortality in the hospitals in Paris between April 1, 1901,

and December 31, 1905, was 17.3 per cent., while the mortality at Bastion twenty-nine, where the serum therapy was employed, was only 3.7 per cent. during the same time. The course of the temperature is entirely changed by this method of treatment. Immediately after the injection there is an exacerbation of temperature, the reaction, which lasts from one to five hours and is then followed by a fall. The pulse usually becomes slower as the temperature abates, and there is a slow increase of the blood tension accompanied by a very active vascularization of the skin so that the color of the patients is remarkably good. The general condition of the patients is also greatly improved. The action of the serum on the renal secretion merits attention. Albuminuria and polyuria dependent on the typhoid disappear a few days after its injection. The ordinary complications of typhoid fever were quite rare among the patients at Bastion twenty-nine during this period. Out of a total of 712 patients with typhoid fever twenty-seven died, and the causes of death were intestinal perforation in nine, ataxo-dynamia in seven, pneumonia in three, peritonitis without perforation in one, suppuration of the pericæcal glands in one, intestinal occlusion in one, gangrene of the mouth in one, erysipelas in one, rupture of subclavian aneurysm in one, cancer of the kidney in one, and gangrenous pleurisy in one. Under ordinary treatment intestinal perforations occur in an average of $2\frac{1}{2}$ per cent. of all cases of typhoid.

3. **Deep Injections of Alcohol in the Treatment of Obstinate Facial Neuralgia.**—Ostwalt protests against the method recently advocated in *Presse médicale* by Levy and Baudouin as one which is not only not new, but also not without danger.

SEMAINE MEDICALE.

February 28, 1906.

Incomplete Forms of Intestinal Obstruction,

By F. LEJARS.

Incomplete Forms of Intestinal Obstruction.—Lejars divides these cases into three groups, the first consequent on other abdominal lesions, the second due to mechanical causes, and the third including the paralytic and spasmodic cases. Treatment with drugs, lavage, or electricity is frequently not attended with success and then operative intervention, preferably in the form of laparotomy, is indicated.

BERLINER KLINISCHE WOCHENSCHRIFT.

February 12, 1906.

1. African Recurrent Fever, By R. KOCH.
2. Herpes of the Larynx and Pharynx (*To be concluded*),
By E. GLAS.
3. Parasites in the Blood of Yellow Fever Patients,
By M. SCHÜLLER.
4. Experimental Skin Tuberculosis in Apes,
By G. BÄRMANN and L. HALBERSTÄDTER.
5. Acute Ascending Paralysis Following Typhoid Fever
(Cure), By A. SCHUETZE.
6. Classification of Bright's Disease, By J. VOGEL.

1. **African Recurrent Fever.**—Koch gives in detail the result of his investigations into recurrent fever as it occurs on the east coast of Africa. The disease is caused by a spirillum which has as its intermediate host a tick which in turn infects the human being. In Africa, the tick, the *ornithodoros moubata* (family Argatidae), lives exclusively in human habitations and is the only tick known which bites man. The African recurrent fever runs a shorter course than the European form, and the blood of patients contains a greater number of spirillæ. The complications of the disease are the same, however, icterus, pneumonia, etc. A remarkable fact worked out by Koch is that the embryos of the tick contain the spirillum and immediately upon leaving the egg the tick is capable of producing infection. Koch believes immunity against the disease

is possible. Its prophylaxis is easy and simple; it is only necessary to keep away from the ticks, which never leave their place of habitation.

3. **Yellow Fever.**—Schüller demonstrates a blood specimen from a case of yellow fever in Louisiana. The red blood cells are seriously destroyed and contain pear shaped or oval bodies. Some of the leucocytes also appear to be disintegrated. The parasites probably belong to the protozoa group of the sporozoa.

4. **Skin Tuberculosis in Apes.**—Bärmann and Halberstädter have experimented in Batavia. They inoculated twenty-four apes with different organs of an orang-outang, the spleen of which showed tuberculous lesions. Some were inoculated cutaneously, some intravenously, some intraperitoneally. Fifty-four other animals were subsequently inoculated by shaving the eyebrows and rubbing the infectious material into the skin. The tuberculous skin lesions which developed differed very widely from the syphilitic lesions found in apes after inoculation. Tuberculous changes in the internal organs almost always accompanied the lesions in the skin.

February 19, 1906.

1. The Extended Freund Operation, By J. VEIT.
2. Marmorek's Antituberculosis Serum, By A. HOFFA.
3. Aortic Disease in Congenital Syphilis, By C. BRUHNS.
4. Œsophagoscopy, By G. GLUECKSMANN.
5. Treatment with Radium, By A. BLASCHKO.
6. Uric Acid and Urea in Gout (Concluded), By FALKENSTEIN.
7. Herpes of the Larynx and Pharynx, By E. GLAS.
8. The Fight Against Malarial Fever, By U. FRIEDMANN.

1. **Freund's Operation.**—Veit lays stress upon some features of the Freund operation for uterine cancer. To prevent sepsis and to aid primary healing of the wound, he injects antistreptococcus serum in all cases in which there is a rise of temperature before operation or when he suspects that the growth has broken down. He uses local anæsthesia with stovaine whenever possible in order to avoid the shock of general anæsthesia with chloroform. He is also very particular in securing the bloodvessels accurately to provide against a possible postoperative venous thrombosis.

2. **Marmorek's Serum.**—Hoffa has succeeded in avoiding some of the disagreeable effects of the hypodermic injection of the serum by administering it by rectum. The advantages of this method are ease and the prolonged period through which it can be given. Hoffa urges the more general use of the remedy.

5. **Radium.**—Blaschko finds in radium a valuable adjunct in the treatment of chronic infiltrating diseases of the skin. In lupus erythematoses, in chronic eczema and psoriasis, and in cases of such a character as chronic redness of the nose, he has had good results from its use. It is devoid of the dangers of the Röntgen ray, it is portable and clean, and can be used upon any part of the body, internal as well as external.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

February 11, 1906.

1. Notes on Typhoid Fever. Walking Typhoid. Typhoid After Childbirth. The Skin of Typhoid Patients, By LUIGI PESERICO.
2. Contribution to the Study of the Paravertebral Triangle of Grocco in the Serous Pleurisies of Infancy, By A. VIGNOLA.
3. Primary Pneumococcus Infection of the Stomach and Intestines; Secondary Peritonitis and Pneumonia, By B. MARCHISIO.
3. Prevention of Adult Diseases in Childhood, By G. B. PERCACINI.
4. The Therapeutics of Cutaneous Cancer, By ARTURO CAMPANI.
5. Variations of Voluntary Apnoea During Inhalations of Hydrogen Disulphide, By PAOLO SABBATANI.

1. **Typhoid Fever.**—Peserico, of Padua, contributes some interesting notes on special types of typhoid

fever, basing his work on the observation of cases for the past twelve years. In walking typhoid, so called, we should not always make a good prognosis even when the temperature, the pulse, and the absence of severe symptoms seem to justify us in doing so. Even such cases are apt to end fatally, as the author illustrates in two instances which he observed. Women who have borne children within a few months before they were attacked with typhoid fever made very bad cases, and in all the patients of this class the disease ended fatally. These patients died of paralysis of the heart, because in all probability child birth diminished their resistance to such an extent that they were unable to cope with the disease. In speaking of the skin of the typhoid patient, the author notes particularly the significance of the sudamina, macular, confluent, or miliary in form which appear towards the middle of the disease, and which, in his experience, forebode a recovery, and indicate the crisis of the disease, so to speak.

3. **Prevention of Disease in Children.**—Percacini believes that most diseases of adult life, organic or functional, can be prevented by timely hygiene or treatment in childhood. At present the hygiene of childhood seems to be confined to the prevention of tuberculosis, lymphatism, rickets, etc. Scoliosis, however, is neglected, although so much can be done to prevent it by timely interference. There are many conditions of adult life which find their prodromas in childhood, as, for example, the convulsions of infants are often the precursors of epilepsy, the bronchial attacks of the young are often the monitors of real asthma, the nervous affections of children lead to graver neuroses in adults, and the mental infirmities of childhood lead to insanity, etc. The remedy for all these ailments is close observation by the family physician, in default of the care of parents and teachers which is so often lacking. Anæmic and lymphatic children should be sent to seaside colonies. Fresh air baths and gymnastics should be insisted upon from an early age.

RIFORMA MEDICA

February 17, 1906.

1. The Diplococcæmia of Talamon-Fraenkel in Lobar Pneumonia, By GUGLIELMO MEMMI.
2. Chloroform-Morphine-Scopolamine Anæsthesia, By ENNIO LORENZELLI.
3. New Contribution to the Surgery of the Stomach, By NICOLA GIANNETTASIO.

1. **Presence of the Diplococcus in the Blood in Pneumonia.**—Memmi finds a great difference of opinion among authors as to the frequency with which the pneumococcus of Fraenkel is found in the blood of pneumonia patients. He investigated the presence of the pneumococcus in eighty cases, and obtained a positive result in twenty-five. Of the cases examined fifty-six recovered, and among these only six showed the presence of the pneumococcus. Of the twenty-four fatal cases, nineteen showed pneumococci in the blood. In most of these the germ was found present from the fourth to the sixth days of the disease. The author concludes that pneumococcæmia is a fairly constant manifestation of lobar pneumonia, and that it can be detected by simply planting a few drops of blood in a test tube containing some broth or agar. The presence of pneumococci in the blood is, moreover, a grave prognostic sign.

2. **Scopolamine in Anæsthesia.**—Lorenzelli contributes the results of his observations in 200 cases in which scopolamine and morphine were used in connection with chloroform narcosis. He found that the use of scopolamine and morphine injections as a preliminary step to chloroformization presented distinct advantages. The patient was saved the unpleasant features of the first few minutes of anæsthesia, and the preparatory period was materially shortened; the amount of chloroform used was materially reduced.

No vomiting followed the narcosis. Seven deaths occurred among the two hundred cases reported, but in each instance the death of the patient was attributable to some other factor than the narcosis, such as the gravity of the operation, the advanced disease, etc.

ROUSSKY VRATCH.

January 21, 1906.

1. Mental Disorders Connected with Current Political Events, By F. E. RYBAKOFF.
2. The Significance of Plasma Cells in the Salivary Gland of the Rabbit, By V. N. VANCHAKOVA.
3. A Case of Chylous Effusion in the Pleura and Peritonæum, By A. E. LETSCHSKI.
4. Endemic Osteoarthritis Deformans, By E. V. BECK.
5. The Relation of Fibroid Tumors of the Uterus to the Heart, By L. K. LINGEN.

1. Mental Disorders Caused by Political Upheavals.—Rybakoff, in a previous article which was abstracted in the *Journal*, reported a number of cases of mental disease in which the current political events in Russia had acted as exciting causes. In the present article he adds five cases to those already reported, and continues the study of the peculiar type of mental disease, observed during the troublous times in Moscow, where he has charge of the clinic for the insane.

2. The Significance of Plasma Cells in the Salivary Gland of Rabbits.—Vanchakova contributes a morphological and experimental study of the salivary gland of the rabbit to the still unsolved question of the true significance of the plasma cells. Most authors regard these cells as pathological, and believe that they occur most often in chronic inflammations. Marschalko regards them as transition forms of white blood cells which either perish or are further changed into connective tissue.

4. Endemic Osteoarthritis Deformans.—Beck describes an endemic disease of the bones which he characterizes as osteoarthritis deformans, and which he observed in large numbers of the inhabitants of a certain region beyond the Baikal. Of 3,153 persons examined among the inhabitants of this region, 1,009, that is, 32 per cent., were found to be affected. The disease was characterized by thickening of the joints, crepitus, limitation of motion, contractures, and thickenings of the epiphyses. In some cases there was also an interference with the growth of the skeleton or with that individual's bones. The affection comes on insidiously without any fever or local inflammatory signs, and involves a number of joints, but never passes on to caries, nor does it ever produce ankyloses nor flail joints. On examination the bones are found to be softened and their ends thickened and flattened under the influence of pressure. The prognosis is unfavorable, the disease being apparently incurable, although a change of climate at times is very beneficial. The cause of the disease seems to lie in some peculiar property of the drinking water, and the majority of cases occur in children between the ages of eight and thirteen years.

5. Relation of Myomas of the Uterus to Heart Disease.—Lingen found that about one quarter of all his patients with fibromyomas of the uterus also suffered with some form of heart disease. His record included sixty-six cases, and showed that in nearly all instances the tumors were intramural, and not superficial or intrauterine. The author thinks there is more than a coincidence in the frequent occurrence of heart affections in women with myomas, and believes that we are justified in speaking of such a thing as "the myomatous heart." Among the causes which may be assigned for disturbances and diseases of the heart in myomas are profuse hæmorrhages, the pressure of large growths on the heart, and myomatous changes in the cardiac tissues.

THE JOURNAL OF NERVOUS AND MENTAL DISEASE

March, 1906.

1. Thyroid Metastasis to the Spine. By F. X. DERCUM.
2. Sarcoma of the Cerebellum; Sarcomatous Infiltration of the Spinal Pia, By F. X. DERCUM.
3. A Case of Brown-Sequard Paralysis, Due to a Fall Upon the Head; Operation; Autopsy, By WILLIAM C. KRAUSS.
4. A Case of Ascending Unilateral Paralysis, By L. NEWMARK.
5. Diffuse Gliosis of the Cerebral White Matter in a Child, By W. N. BULLARD and E. E. SOUTHARD.

1. Thyroid Metastasis to the Spine.—Dercum describes a case in which thyroid metastasis occurred in various situations, although that occurring in the spinal column was undoubtedly the cause of the nervous symptoms presented by the patient, if not the direct cause of her death. The case opens two questions: First, as to the possible metastasis of benign tumors; and, secondly, whether a thyroid tumor to become metastatic, must not necessarily be malignant. From observations made in recent years, it seems evident that an ordinary goitre which has existed for a long time and which has never given rise to any symptoms suggesting malignancy may suddenly become widely diffused. By preference this metastasis takes place in the bones and in the lungs. In some patients secondary tumors of thyroid structure have been removed without any attention having been attracted clinically to the thyroid gland itself. The question as to the malignant character of the enlargement of the thyroid gland in cases of metastasis is one that cannot be regarded as settled.

3. A Case of Brown-Sequard Paralysis, Due to a Fall Upon the Head; Operation; Autopsy.—Krauss reports a case which offers some features not commonly met with in the study of Brown-Sequard paralysis. The author describes the history of the case, the operation, and autopsy, and says in conclusion: (1) It is the only case reported of a lesion in one half of the spinal cord, not due to stab wound, tumor, hæmorrhage, dislocation, or a syphilitic meningomyelitis, but to a splintering of the lamella without fracture of the body of the vertebra. (2) It is the only case so far reported where a laminectomy has been performed at the seat of the injury with a view of removing the lesion. (3) The symptoms corresponded very clearly to the commonly accepted syndrome, except that no narrow band of anæsthesia was found near the hyperæsthetic area.

5. Diffuse Gliosis of the Cerebral White Matter in a Child.—Bullard and Southard give the history of a child, six years of age, which after a fall on the back of the head, gradually lost his power to walk, grew deaf, dumb, blind, and stupid, and died twelve months after the accident. The autopsy showed a peculiar overgrowth of neuroglia, with some destructive properties, confined to the white matter of the posterior parts of the cerebrum, optic thalami, and areas in the white matter of the cerebellum.

GLASGOW MEDICAL JOURNAL.

February, 1906.

1. Double Lip. Hypertrophy of Labial Glands, By G. H. EDINGTON.
2. Case of Exophthalmic Goitre in a Man Treated Successfully, By W. F. SOMERVILLE.
3. The Röntgen Rays in the Diagnosis of Urinary Calculus, By J. R. RIDDELL.

1. Double Lip.—Edington presents several cases of this deformity, and states that it occurs in young males and runs a chronic course. It is a fold of mucous membrane, does not involve the red prolábium, affects the upper lip, and is bilateral. The cause is an overgrowth of the labial glands, with absence of inflammation and of mucous discharge. Concerning the exciting cause, dentition may be more or less responsible. Treatment

consists in removal of a strip of mucous membrane, including all the enlarged glands.

3. Roentgen Rays in the Diagnosis of Urinary Calculus.—Riddell thinks the demonstration of the presence or absence of stone in the urinary tract one of the most difficult tasks in radiography, on account of the depth of the tissues to be penetrated and the movements of the abdominal viscera due to respiration. A diagnosis can usually be made with a fair degree of certainty unless the patient is very stout. Reid made thirty-six positive diagnoses of stone in the kidney, ureters, and bladder, and the diagnosis was confirmed by surgical operation in thirty-five. The procedure consists of a fluoroscopic examination and an examination of the radiograms. Four or five of the latter should be taken. The urinary tract must be localized, scybala in the bowels must be excluded, and important points to be noted are the iliac, chest, the last ribs, the transverse processes of the lumbar vertebræ, and the edge of the psoas muscle.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of January 10, 1906.

The President, Dr. JAMES M. ANDERS, in the chair.

Chronic Acetanilide Poisoning.—Dr. JAMES B. HERRICK, of Chicago, read a paper in which he reported the case of a woman of fifty who for seven years applied daily to a large varicose ulcer of the leg about an ounce of a powder, the nature of which was unknown to her. There had been weakness, dyspnoea, palpitation, mental depression, and general "nervousness." Cardiac and pulmonary findings did not explain the cyanosis which was present. The powder was found to be pure acetanilide. On stopping its application there was pain with extreme restlessness and almost maniacal excitement. The reapplication of the powder or the use of acetanilide internally quieted the nervous system. By gradually lessening the amount of the drug applied it was finally given up. This was followed by improvement in the general condition.

A study of the case for several weeks showed that the effect of the chronic intoxication on the general nutrition was marked. Anorexia, irregular action of the bowels, weakness, and considerable emaciation disappeared promptly when the drug was stopped. The blood did not show methæmoglobinæmia, as reported in some other cases. The anæmia was moderately severe. Leucocytosis was moderate. Morphological degenerative changes in the red corpuscles were not pronounced. One month after the use of the acetanilide had been stopped the blood count showed 5,580,000 red corpuscles and 100 per cent. of hæmoglobin. The urine averaged 1,800 c.c., with a specific gravity of 1.015. It was of a port wine color, and on standing became brownish black. Fehling's solution revealed no copper reducing substances. The enlargement of the spleen was striking, as was its distinct diminution in size when the intoxication was at an end. Feeding animals with acetanilide had failed to produce splenic enlargement, except in one dog, in which a slight enlargement with connective tissue increase was found. The addiction to the use of the drug was as pronounced as in the case of morphine or cocaine, though more amenable to treatment, which was here entirely successful by the method of gradual withdrawal.

Dr. Herrick thought the acetanilide habit was probably more common than was generally supposed. The ease with which the drug might be obtained by the laity, either in its pure condition or as the main ingredient of medicines sold for the relief of headache, tended to this frequency. The recognition of the con-

dition depended on the detection of the use of the drug. Otherwise unaccountable cyanosis should arouse suspicion. Alimentary disturbances and neurasthenic symptoms might be due to the poisoning. Enlargement of the spleen had been reported in several cases. Secondary anæmia might be extreme. Strangely enough, in some cases polycythæmia rather than anæmia had been reported. The surest aid to diagnosis was said to be the examination of the urine, which revealed the dark color, paramidophenol, and an increase in the conjugate sulphates.

It was pointed out that the condition must be distinguished from diseases that might produce cyanosis, such as cardiac and pulmonary disease, as well as from the anæmias and leucæmias. Careful study of the blood would clear up these points. Cyanosis with polycythæmia and splenic enlargement might be simulated by acetanilide intoxication, also cyanosis that was enterogenic. The study of the urine was here all important as an aid to diagnosis. Promising fields for investigation were opened by the recent interest in cases of cyanosis, polycythæmia, and splenomegaly. Perhaps a study of chronic acetanilide poisoning might throw some light upon these cases.

Dr. ALFRED STENGEL spoke of the necessity of distinguishing between acute acetanilide poisoning, which was exceedingly common, and chronic acetanilide poisoning, which was rare. His experience was limited to five cases, three of which he had examined; two others he had seen, but was not permitted to report. The first case was one similar to that reported by Dr. Herrick. There were the marked changes in the blood such as he had not seen in any other case. The case was that of a young girl brought to the University Hospital to be under the care of Dr. Matthew H. Cryer for trifacial neuralgia. Upon her arrival she was in such a desperate condition that surgical treatment was not warranted, and she was put under medical inspection. She was extremely cyanotic. By direction of Dr. Stengel she was bled to the extent of six or eight ounces. Dr. C. Y. White was convinced of the presence of acetanilide poisoning, and soon convinced Dr. Stengel of the truth of his supposition. After investigation it was found that the girl was surreptitiously receiving acetanilide capsules, and she afterward confessed it. The case was one of those diagnosticated as congenital heart disease. The diagnosis had been made by a distinguished clinician who, it was suggested, was a good deal occupied and had made a more or less casual examination. Among several other diagnoses which had been made of the girl's condition was that of mediastinal tumor. That such mistaken diagnoses should have been made was not a surprise, owing to the most remarkable changes through which the heart passed. It had increased tremendously in size. She had had several attacks of acute dilatation with the appearance and subsequent disappearance of a loud systolic murmur and corresponding increase and subsidence in the intense cyanosis. With the cyanosis the extremities were warm. This was one of the first features suggesting the true nature of the case. Dr. Stengel expressed his belief that such changes in the heart could not be produced without serious damage to the musculature. To have a heart suddenly dilate and spread an inch or an inch and a half, beyond peradventure, and then pull itself together upon the cessation of the drug, and the cyanosis disappear, he felt could not but leave some impression upon the heart. Interesting features were presented in the two other cases he had examined. In one, that of a very intelligent man, there were symptoms of cyanosis of the fingers and lips, with a sort of steel blue color of the skin. The man had been taking a proprietary preparation, and showed what Dr. Herrick called a peculiar moral perversity: When under the influence of the drug he

denied taking it; when not under its influence, he was willing to confess his use of it. The third case was that of a woman who secured the drug without the attending physician's knowledge. Dr. Stengel's diagnosis was proved to be correct. While the patient was under his care he found it possible to induce cyanosis, which disappeared readily when the drug was stopped.

In the first case of the three the spleen was greatly enlarged. In the second there was no splenic enlargement, but marked polycythæmia. This had suggested the possibility of some of the cases of chronic cyanosis reported being those of acetanilide poisoning, which would explain the polycythæmia. In the two latter cases there was no change in the character of the red corpuscles.

Aside from these intense cases, Dr. Stengel believed with Dr. Herrick in the existence of a large number of cases of acetanilide poisoning of minor grade. In his own practice he had seen cases of disturbance of the heart's action and of the general health which he believed to be due to frequent ingestion of the drug in sufficient amounts to interfere with health. Because these were the cases most numerous, he believed them to be of the most importance to the profession. Here again he believed with Dr. Herrick that if physicians were on the alert the cases would not be difficult to recognize. He admitted the possibility of their being mistaken for a number of conditions, as detailed by Dr. Herrick.

Dr. S. SOLIS-COHEN continued the thought expressed by Dr. Stengel that the physician should be constantly on the watch for the minor grades of acetanilide poisoning. In cases presenting ill assorted and vague symptoms, explanations other than the true one might be given, unless some knowledge of the history or an unguarded remark of the patient directed attention into the right channel. He recalled the case of a very intelligent man who had been under his care for a number of years, who had originally had attacks of migraine which he had himself treated by tablets bought at any drug store. These headaches and attacks of vomiting had been completely relieved by the use of glasses. This case was an instance of true migraine relieved by proper refraction, the existence of which was looked upon with doubt by a good many neurologists. Some time after passing from under Dr. Cohen's observation and while spending the summer in the mountains the patient was suddenly attacked with fainting, and he was informed by the examining physician that he had acute Bright's disease. He returned promptly to Philadelphia. Dr. Cohen's examination showed the urine to be free from albumin, casts, and sugar. It was learned that the man had been taking, when he felt tired, a certain proprietary headache medicine. A further study of the case convinced Dr. Cohen that it was one of chronic acetanilide poisoning. In another case recalled by Dr. Cohen, in which the patient had had chronic heart disease for some time, the cyanosis was out of proportion to the cardiac lesion, and investigation showed the same habit. He was convinced that the preparation was perhaps the most common and most dangerous cause of chronic acetanilide poisoning among intelligent people.

One of the great dangers of chronic poisoning with coal tar products was pointed out to be the sudden yielding of the heart to some unusual strain. Dr. Cohen further recalled the case of a young woman who had persisted in the taking of something of a similar nature which had been originally prescribed for migraine. About a year after her marriage she died suddenly, following an apparently normal labor. The knowledge of the continued use of the drug during pregnancy gave the clue to the cause of death. The cases were cited as illustrations of the widespread habit of taking coal tar products and of the hold which the

habit took upon people, although warned against it. He pointed out the importance of recognizing the early changes resulting and the importance also of not mistaking for serious organic disease of heart or kidneys the condition sometimes developed.

Dr. HENRY LEFFMANN called attention to the probability that under the influence of the new pharmacopœia there would be an increase in the cases of chronic acetanilide poisoning. This was because the pharmacopœia had put upon its list the compound powder of acetanilide. In his opinion it was bad judgment to so place it, since every pharmacist would feel at liberty to sell it for headaches.

Dr. H. C. WOOD, JR., thought that Dr. Herrick had made out a very good case of the nonexistence of chronic acetanilide poisoning. It had seemed to him that Dr. Herrick's case, also those of Dr. Stengel, were cases rather of a series of successive acute poisonings than of one chronic poisoning. There were not shown any of the characteristic symptoms following chronic poisoning; for example, the persistence of the symptoms after the withdrawal of the drug, and no permanent injury wrought by the prolonged use of the drug. Moreover, it was noted that Dr. Herrick in his experiments had been unable to produce any serious pathological lesion in animals by the prolonged use of the drug. The symptoms had occurred immediately following the administration of very large doses, and persisted, because the drug was persisted in until the animal died. It seemed to him, therefore, much more logical to regard the cases as repeated attacks of acute poisoning following the repeated ingestion of the poison. This, of course, had no bearing upon the existence of the drug habit. He thought there was a distinction to be made between the drug habit and the poisoning produced by that habit. A point of interest to him was the suggestion that the cyanosis had occurred as the result of the ingestion of acetanilide. He thought it was commonly held that cyanosis was due to the presence of methæmoglobin in the blood. Dr. Herrick and others, however, had failed to find any methæmoglobin in the blood. If this was present in small quantities, its existence might be difficult to prove. On the other hand, if it was present in only small quantity, it could not account for the marked degree of cyanosis in these cases. He therefore thought that the great degree of cyanosis must be ascribed to the acute dilatation of the heart and failure of circulation characteristic of poisoning with the drug. It had been shown by Sânger that blood which had undergone chemical change with the production of methæmoglobin was not destroyed; in other words, it was possible to restore hæmoglobin to a corpuscle which had had it changed into methæmoglobin. The experiments of a German investigator had shown that in those cases in which the blood had undergone chemical change a larger proportion of oxygen would be taken up if the atmosphere was one of pure oxygen. He experimented with mice and found that in an atmosphere of pure oxygen they would withstand a dose two or three times as large as the usual fatal dose. He also found that if he increased the pressure of the oxygen they would withstand a still larger dose of the poison.

Dr. W. M. L. COPLIN had not seen a case of chronic acetanilide poisoning and had had little experience with the acute forms. He referred to researches made under his direction upon the influence of the coal tar products upon the protoplasm of the red blood cells. The work was especially in connection with the aniline dyes, acetanilide, and antipyrine. Such marked changes in the red blood cells were found that on the cover glass the blood lacked the color of ordinary blood. A point of diagnostic value mentioned was the appearance of the exudates when present. Nothing was found characteristic of actual nephritis. In concurrent work done

with carbolic acid renal changes were quite marked. From Dr. Coplin's work upon the spleen of animals he regarded with some skepticism reported instances of cirrhosis of the liver. One experimenter, in a large number of dogs, had observed a single case of cirrhosis of the liver. Concerning the microchemical reaction of the blood, the research work did not prove satisfactorily that there was any morphological change in the blood which was at all characteristic. The striking feature was that there was no change in the colorability of the blood explaining this peculiar hue of the freshly dried blood.

Dr. JAMES C. WILSON said that if the distinction suggested by Dr. Wood between repeated acute attacks and chronic acetanilide poisoning was to be observed, cases of the latter were indeed very limited. He cited his observation of a case showing the occurrence of a persistent symptom in a patient by whom large doses of acetanilide were taken every day. The patient, a man of about twenty-six, under treatment for two years for syphilis, had taken enormous doses of the iodides. He had suffered much from headache and there was noticed a progressive tendency to cyanosis, which his attending physician tried to explain by some idiosyncrasy in regard to the iodides. Under Dr. Wilson's care in the hospital the character of the cyanosis and the cardiac symptoms with splenic enlargement led to the diagnosis of acetanilide poisoning. Investigation showed that the patient had had prior to the chancre migraine, and had formed the habit of taking different kinds of headache powders obtained from the apothecary. Attempts to withdraw the drug were followed by outbreaks of intense headache. With the substitution of small doses of morphine without the knowledge of the patient all the symptoms disappeared and he left the hospital without having taken either acetanilide or morphine for two or three weeks and without the knowledge that he had had morphine. The point made by Dr. Wilson was that brought out by Dr. Herrick, that in some of these cases the original cause of distress might disappear and be replaced by a similar continuous suffering arising from the use of the drug itself. In Dr. Wilson's case the ultimate withdrawal of the acetanilide was followed by complete cessation of the headache for which the patient had habituated himself to the drug.

Dr. DAVID L. EDSALL said that he had had little experience with chronic acetanilide poisoning. He inquired of Dr. Herrick how much evidence was shown by the literature of the persistence of mental symptoms after chronic acetanilide poisoning of long duration. He had seen one case, whether coincident or otherwise, in which the man had had chronic mental symptoms and had been placed in an asylum for the insane.

In regard to the relation of the methæmoglobin to the symptoms, in one case in which there was profound cyanosis examination of the blood and urine revealed nothing but oxyhæmoglobin in the blood and in the urine, and no methæmoglobin. It was certain that the presence of methæmoglobin was not a satisfactory explanation of the cyanosis. Reference was made to one authority on the chemical analysis of the urine who had cast much doubt upon the existence of methæmoglobinuria and considered the vast majority of the reported cases due to erroneous observation. Dr. Edsall thought the same might be true of the blood.

Dr. W. E. ROBERTSON said that his experience had been limited to two cases, one an acute case in which the infection occurred from an acetanilide dressing, and in which the symptoms subsided upon the withdrawal of the dressing; the other a chronic case, and in this the blood picture was similar to that presented in the discussion. In the chronic case, notwithstanding the great cyanosis, there was no dyspnoea. It resembled very much a marked case of polycythæmia in which the cyanosis was of intense degree.

In connection with Dr. Wood's reference to the cases being regarded as instances of repeated attacks of acute poisoning rather than of chronic poisoning, he cited one observer who had noted upon the complete withdrawal of the drug the persistence of the symptoms and also of mental symptoms.

Dr. GUY HINSDALE said that in the early days of the use of acetanilide, when it was known by the name of antifebrine, he thought the drug was used much more freely and injudiciously than at present. He recalled the case of a young man with epilepsy in whose treatment the remedy was used for two years, and this patient, upon leaving the city for a year, had obtained a considerable amount to be used continuously. Upon his return, while there was some cyanosis, no other bad effects were apparent. The effect upon the epilepsy was not curative, but probably mitigating. At present Dr. Hinsdale would hesitate to use the drug in the quantities in which it was formerly employed.

Dr. HERRICK was inclined to regard the criticism of Dr. Wood of the term "chronic" acetanilide poisoning as a just one. He thought that probably the action in these cases should be looked upon as cumulative; and yet he did not believe that it had been definitely decided how permanent the damage done was. It could not be stated certainly that the heart muscle was not more or less permanently damaged, or that the blood making organs would be restored to their normal function. Neither was there certainty concerning permanent mental effects. He replied to Dr. Edsall that he could not answer his question regarding permanent mental derangement following chronic acetanilide intoxication. Most of the patients had recovered quite promptly upon the withdrawal of the drug. From the records of some of the cases he had observed that the finding of methæmoglobin was somewhat doubtful, and felt that the examination for its presence should be very carefully conducted before it was declared to exist.

Dr. Herrick inquired whether any of the members present had ever seen a case of chronic nutmeg poisoning. He had within the last few weeks seen a patient with a history almost identically that of the cases under discussion. The cyanosis was most intense and could not be accounted for by any discernible cardiac or pulmonary lesion. The patient, a German woman of advanced years, had been taking half a nutmeg daily for fifteen years for some bowel trouble. About a week before she was seen by Dr. Herrick she had stopped the nutmeg. Nothing abnormal was found in the urine, and the cyanosis, though extreme, was somewhat better. While acute nutmeg poisoning had been definitely recognized, Dr. Herrick stated that anything like chronic nutmeg poisoning, where the patient for fifteen years chewed and swallowed the nutmeg daily, was new to him.

Meeting of January 24, 1906.

The President, Dr. CHARLES K. MILLS, in the chair.

"SYMPOSIUM" ON THE CARE OF THE INDIGENT INSANE.

Public Care of the Insane.—Dr. JOHN B. CHAPIN, of the Pennsylvania Hospital for the Insane, likened the Philadelphia Hospital to an enlargement of the county poorhouses of early days, caring for the sick, poor, paupers, idiots, and insane. It was stated that from a general observation the majority of the insane poor were previous to the insanity self supporters, rent payers, and, in a sense indirectly tax payers. They were therefore entitled to relief and care. The first essential in their care was an absolute divorcement of the insane from an almshouse with its associations and traditions. The new hospital should be in the country. There should be a qualified medical director, clothed with ample power, possessing a reasonable tenure of office, and in no way subject to a so called warden, who would

soon or later stand for some political organization. Among some of the results realized by the chronic class of patients would be the formation of orderly habits of living and occupation, afforded by the opportunities of a farm and a large community, decided improvement in the mental condition of the whole number, and the restoration of many to their families. Whether this work should be undertaken by the city or State was considered immaterial, provided it was well done. If undertaken by the State, there would be a reasonable guarantee that a higher standard of care would be maintained and the institution be free from the demoralizing influences of politics. Accommodation should be provided for at least 1,800 patients, together with the necessary officers and employees; and a scheme agreed upon to meet the inevitable annual permanent increment. The plan of erecting plain, substantial blocks, or detached buildings, supplemental to an administration building, which could be added to from time to time, furnished a suggestion for the scheme which was now proposed. The detached blocks furnished extraordinary facilities for classification of special cases, and reduced the danger of destruction by fire to a minimum. Any plan presented should permit of additions and expansion as necessary.

Assuming the removal to the country of the pauper population, Dr. Chapin believed there should be provided on the present site a hospital for the reception of emergency cases, acute cases of delirium from any cause, and persons arrested requiring temporary detention on the sudden outbreak of insanity. Many such persons, he believed, would be discharged without transfer to the colony. This institution should be a hospital in name and fact, equipped for the best hospital care of acute cases. The adoption of some such plan as outlined Dr. Chapin believed the only way in which to solve the present problem of the disposition of the large number of chronic insane persons now in the Philadelphia Hospital. Each patient should have a proper allotment of cubic and superficial space, and a dietary should be established to meet the wants of the able bodied as well as the sick and feeble. There should be organized a medical service of a high standard for the emergency wards. This, in Dr. Chapin's opinion, the medical profession had a right to demand as citizens and sympathizers with a distress that might afflict any one in the community. If this was well done, he did not think tax payers would question the expenditure. To do less than was proposed he believed would result in the gradual degeneration of the whole service, as had been shown in every municipality where the attempt had been made to care for the insane poor apart from State supervision and control.

State Care of the Insane in New York.—Dr. FREDERICK PETERSON, ex-president of the New York Commission in Lunacy, in this paper said that it was a singular circumstance that a stranger should speak to Philadelphians upon the humane care and treatment of the insane, for Philadelphia had been the first city in the Union to preach the gospel for these unfortunates and the first to practise the doctrine. More than 150 years ago Philadelphia established a hospital for the insane, which was a long step in advance of that period. Dr. Rush, of Philadelphia, was the Pinel of America. He abolished whipping as a remedial measure for insanity, and discarded manacles and chains. Dr. Peterson reviewed the progress of the insanity legislation in the State of New York, the first step of which was taken fifty years subsequent to the establishment of a hospital for mental disorders in Philadelphia. By 1896 all the indigent insane of the State of New York had been placed under State care. The fourteen State hospitals and the twenty-three private retreats for the insane were all under the jurisdiction of a State Commission in Lunacy, consisting of a physician, a lawyer,

and a business man. These private retreats were supervised and inspected, and licenses might be revoked on failure to comply with the regulations of the commission. This body had not only supervision over the State hospitals, but the entire management of the expenditures for the maintenance of the patients and the construction of new buildings. The old idea of separate provision for the acute and chronic patients was long ago abandoned. A summary was given of changes in contrast to the methods employed in the county management. Among these were the establishment of training schools for nurses in all the State hospitals and a central pathological institute, or school of psychiatry, on Ward's Island, in the New York city asylums, to which all the assistant physicians from the various hospitals of the State went for instruction in the latest scientific method of study and treatment of the insane. This was under the directorship of Dr. Adolf Meyer. Most of the hospitals had staffs of consulting physicians from neighboring cities. A woman physician, a salaried dentist, and an oculist were required at each hospital. Each hospital was thoroughly equipped with everything needed in the way of medical and surgical instruments and appliances. Emergency commitments now in force gave speedy access to hospital care. Restraint by means of straps, etc., had been almost abandoned and some wards had unbarred windows and doors. Occupations for the patients had multiplied, and the work of the able bodied in shops, gardens, and fields had monetary value. Wards and rooms had been made attractive, and religious services were held by salaried chaplains. Special tuberculosis hospitals had been constructed at several of the county asylums, and several of the hospitals had small colonies at a distance for the care of convalescent patients in change of air and scene.

New York State had appropriated \$300,000 to construct on Manhattan Island a psychopathic hospital to act as a distributing centre for the insane of all classes. It was urged that every great city should have emergency pavilions in connection with the hospitals to which patients supposed to be insane could be at once taken, not only for observation, custody, and diagnosis, but for immediate treatment.

Dr. W. M. L. COPLIN thought that no large city could properly care for the insane and the indigent not insane in its corporate limits, on account of the value of the ground and because of the higher cost of maintenance than in the country districts. The general influence of the outlying districts he felt was better than that of the city. He favored the establishment of detention, or observation, wards similar to those in New York for the treatment of cases curable within a reasonable time and for cases in which careful study might offer better methods of treatment. Such quarters should accommodate from two to three hundred patients, and should be exceedingly elastic to prevent the possibility of overcrowding. They should be well officered with eight or ten volunteers, and in addition men of experience and competent to teach the volunteers. Above these there should be a consulting or directing staff composed of men of eminence. He would have the tuberculous cases treated separately from those not tuberculous. He regarded the present unfortunate condition of the insane poor of Philadelphia as largely the result of an increase in numbers which had exceeded the growth of facilities, and said that it was difficult to impress upon governing bodies the fact of the increase of the numbers of the insane poor and the advances made in the treatment of insanity. The question of hired help was also considered. Intelligent help would naturally work in those institutions in which the environment was in accord with their own individuality, and the city institution would probably receive what was left. The point to be realized by the medical pro-

fession was that lawmaking and appropriating bodies would give what was desired if the matter was kept before them and the urgency shown. It was well to drive home to the people the necessity of such reforms and have their sympathy.

Dr. F. X. DERCUM said that specific and practicable plans should be outlined, and believed that the psychopathic hospital, which should take the place of detention wards, was necessary and feasible. The stigma of a commitment also by this means would be obviated. He would favor caring for the insane of the city of Norristown, where there were ample grounds for buildings; and, because of its ready access from Philadelphia, patients could be readily transferred from the psychopathic hospital. He expressed his hearty accord with the idea of convalescent wards and colonies if they were proved practicable. He thought all were painfully impressed with the difference in the care of the insane of Philadelphia and that of New York, and felt that it was largely dependent upon the profession to make known the wants of the insane and to maintain the agitation until something definite was achieved. He realized the difficulty of securing the highest class of attendants at the almshouse, but thought it might be overcome by the establishment of training schools. He would favor the establishment of a training school for men similar to that in New York, and the men should take charge of the male wards in the hospital and some in the psychopathic department. The pupils should receive little or no pay and leave at the end of a definite time with a definite earning power. To get along with the no restraint method, there would be a larger number of attendants and better paid attendants required. He agreed with Dr. Coplin that the authorities would grant the improvements asked for by the medical profession.

Dr. CHARLES W. BURR said that he knew of no new argument for a change of conditions at Blockley, that it was a perfectly well known fact that the insane department of the Philadelphia Hospital and, indeed, of Blockley itself, was not an honor to the city of Philadelphia. It was also known, or ought to be known, that it was the fault of no one but the citizens of Philadelphia. They were blameworthy, because they did not like to spend money. The one way to straighten out the difficulty was to take the care of the insane poor entirely out of the hands of the city. He favored the establishment of the psychopathic ward in which cases of acute mental disease could be taken at once.

Dr. WILLIAM G. SPILLER said that no one could doubt the needs of Blockley, that until within the last few weeks patients had been sleeping on the floors. The subject which Dr. Coplin had brought before the public was not a new one. He recalled the hopefulness entertained by many of the staff a few years previous when looking about for a site, which efforts, however, had fallen into the background, and it was not surprising that a pessimistic view had overtaken some. Personally, he was delighted to know of the hopeful outlook held by Dr. Coplin. In listening to Dr. Peterson's paper he had felt the difference existing between New York and Pennsylvania in the care of the insane. Reference had been made to the high class of work done by Dr. Meyer on Ward's Island. He asked Dr. Peterson to describe the nonrestraint system. It had been his misfortune to have a patient jump out of a window, which he felt was also likely to occur among those slightly insane.

Dr. WILLIAM PICKETT believed that the immense advance in New York State in the care of the insane was largely due to the fearless and energetic work of Dr. Peterson. During the ten years of Dr. Pickett's association with Blockley he had seen several plans developed, all of which had failed. The present movement, he believed, would succeed under the management of

Dr. Coplin. He felt strongly that it was an ordinary commonsense proposition that Philadelphia should have an emergency ward for the insane. In 100 admissions to the insane wards he had found that thirty patients recovered in two months or less, twenty-four in six weeks or less, and sixteen within a month. All the trouble, expense, and stigma—if there was such—of a commitment could be thus saved by the emergency ward, or hospital. Such a ward, in addition to lessening the number of chronic insane in the State hospitals, would diminish the tendency to recurrence of insanity, and, above all, would save from an insane asylum many of the cases of puerperal insanity and confusional insanity in terminal Bright's disease, pneumonia, and other physical disorders. In such a psychopathic hospital there should be accommodations for at least 300 patients.

The PRESIDENT said that instead of speaking in detail upon the subject he would have the secretary read a set of resolutions which he had formulated in the line of what had been said, adding that it was only by such efforts as had been shown that results hoped for, and for which the profession had for years been working, would be brought about.

Dr. ALFRED GORDON emphasized strongly the necessity of first instructing the general practitioner in psychiatry. Should the hospital for the insane be removed from the city, he thought there would be removed the practical means of giving this instruction, and the future general practitioner would know still less than he knew at present of the science and treatment of insanity. In France the study of insanity was made one of the branches in the general curriculum, and there the general practitioner was able to talk with the laity in an intelligent manner if the necessity arose. He believed that the general hospitals should have a special psychopathic ward for receiving patients who in the course of pneumonia or other infectious disease might have delirium. Regarding the insane department of the hospital, he would suggest that the staff of alienists take full charge of it, each member of which staff should give at least six months' attendance. In addition to this, a large number of resident physicians should be appointed. He would place the superintendency in the hands of a layman who would work under the absolute direction of the staff. The psychopathic ward should also be under the full charge of the staff of alienists, for cases even slightly confused at the beginning should be under the care of eminent men.

Dr. HAWK thought that the State should have immediate care of the city insane. He said that those in charge at Blockley were greatly handicapped by insufficient funds, and for more than 1,800 patients there was a totally inadequate number of physicians. The work of the internes as alienists he regarded as practically useless. At times fifteen to twenty patients were admitted in a day. Only within the last month had the full quota of assistants been allowed by Councils. Last year there had been paroled and discharged over twelve per cent. of the whole number of patients under treatment. In the majority discharged as recovered it was meant that they were possibly as well as they had been for some time prior. In four or five per cent. there was absolute recovery. The death rate had been thirteen per cent. plus. This was due to the fact that many of the cases were of senile dementia, with a large proportion of patients between the ages of 70 and 100 years. Such cases had been transferred to the insane department because there was no other means to take care of them. Dr. Hawk thought the average for other cases would compare favorably with those of many of the New York asylums, and said that every endeavor had been made to keep the standard at Blockley high,

but the means had been entirely inadequate for the purposes desired.

Dr. A. R. MOULTON feared the idea would go out that the medical work at Blockley was not well done. He had, however, had opportunity for observing the work at Blockley and could say that the medical work in the insane department was most excellently done, and this was emphasized by the fact of the very large number of patients and the small number of medical attendants. He felt it a duty, as it was also a pleasure, to state that Dr. Hawk had done most excellent work in the Philadelphia Hospital.

Dr. WILLIAM S. WADSWORTH referred to the housing of the insane, pointing out that all could not be housed in the same manner; some could not be put into tents; the working insane should not be housed with the feeble bodied, or the maniacal with those only temporarily insane. Tents were regarded as undesirable because of the difficulty of keeping them clean. He favored the use of pavilions with the buildings running north and south and placed sufficiently far apart for each to get the east and the west sunlight on the sides. There should be a connection with the main hospital and the ability to isolate any ward at a moment's notice. The matter of occupation he regarded of extreme importance. There should be something for the patients to do which would moderate that moral and mental tension which was their destruction. Without a due regard to this element the subject was only partially covered. As medical men, he thought the profession were prone to think principally of the sick insane. There should be something to keep the patient from thinking of himself and so sitting in the darkness of his own mind.

Dr. BURTON CHANCE regretted that papers of such vital interest should not have been listened to by the entire society, since many of the members were connected with the management of Blockley, and the subject was one of such great urgency.

Dr. PETERSON approved of Dr. Wadsworth's suggestions of occupation for the patients, and said that the colony system included this. He thought the effort in Philadelphia should be to establish the psychopathic hospital in the city for emergency cases and then as soon as possible get all the other insane into the country. He suggested that the passage of a law providing for the maintenance and equipment of such an institution on condition that Philadelphia furnish the land and erect the building might be helpful in the project. In New York such a law had been passed to aid in securing the psychopathic hospital.

Letters to the Editors.

THE ORDERLY PRESERVATION OF REFERENCES.

502 WEST ONE HUNDRED AND FORTY-THIRD STREET,
NEW YORK, March 4, 1906.

To the Editors: The postgraduate textbook and reference question has become a serious one with many young practitioners removed from a "reference environment." They do not want to stand still and continue to practise as they were taught in their undergraduate term, or use as authority their textbooks, often so laboriously gathered. Yet it is not uncommon for some village doctor to offer as his authority the work of some living author of note, whose edition which the doctor uses is to-day wholly discredited by the author himself. As a rule young doctors cannot afford to stock their libraries with the oft recurring new editions, and their current literature consists of a dust embalmed pile of journals in some out of the way corner. With the rapidity of progress in practical medi-

cine which has been shown in the last two or three decades, a three year old textbook is generally worthless as an authority and reference. Five years after graduation a doctor can throw aside his initial library, as it is no longer authoritative. If he is beyond the reference library privilege and cannot keep on purchasing books, what other recourse has he? This subject is worthy of more attention than has been accorded it, for it applies to 80,000 of the 120,000 physicians in the United States—those not resident in or near the large cities.

The methodical young man will usually solve this problem in some way, but his inexperience will lead him astray at the start. "System" is now a vocation if not a profession, and it would be worth a young doctor's while to call to his aid at the start some skilled teacher of "system;" but he will not, as he is not taught to do it. The solution lies almost wholly in the proper treatment of current medical literature. The great weeklies especially, of which the *New York Medical Journal* is the highest exponent, allow nothing in the way of medical discovery or improvement in method or practice to escape their pages. He must learn to read his current medical literature methodically, but he must also learn to sift out the chaff and form the matter worth preserving into a complete mass for reference. The half dozen medical journals which the average doctor expects to pay for should be well selected. If his practice is general, two of this number should be weeklies.

With the present admirable devices for filing and indexing, and the same care which should be given to other factors of his armamentarium, he can become independent of books as he grows out of his initial textbook outfit. But his system should be a correct one at the outset. If he thinks "any old way" will do, he will discover years hence that all his work has been for naught. I recently met a practitioner of five years who started right. In test of his method, he was able to lay before the inquirer the complete current symposium upon any question in medicine during his five years of practice within one minute after the request, which proved its value as a reference. There is no idea of value in any bound volume that has not been previously threshed out much more comprehensively in the medical journals. Here lies the young doctor's solution of an important problem.

P. M. WISE.

Book Notices

MAY, C. E.¹ *Manuale delle malattie dell'occhio ad uso degli studenti e dei medici pratici.* Traduzione italiana sulla quarta edizione americana con note ed aggiunte del Dr. EDMONDO TROMBETTA. Torino, 1906.

A book which in a short time has passed through four editions in English, and which has received the unusual honor of being translated into German and now also into Italian, has assuredly proved its right to existence. May's manual, in fact, has satisfied a distinct want, and the appreciation that it has received has been well deserved. It has aimed to present the essentials of ophthalmology in brief compass and yet with sufficient detail to satisfy the needs of the medical student and the general practitioner. Competent critics agree that in this aim it has succeeded, and better, apparently, than any of its rather numerous rivals; and accordingly it has been widely recommended and extensively used in medical colleges and also by physicians throughout the country.

The present English edition and its Italian reproduction are distinguished by the unusual number and ex-

¹ The real name is Charles Henry (in Italian C. Enrico) May.

cellence of the illustrations. They are emphatically illustrations that illustrate, each telling something that could not be told nearly as well by any description, however graphic or minute. Those depicting diseased conditions are uncommonly faithful to life and instructive.

Touching on a quite minor point, we think that the author might well have mentioned the apparently specific action of zinc chloride and zinc sulphate in diplobacillus conjunctivitis. Moreover, we should not quite agree with him in the statement that the large majority of cases of ophthalmia neonatorum are gonorrheal in origin. The careful researches of Groenouw, which, we believe, have been corroborated by others, have shown that only from forty to fifty per cent. of the cases of ophthalmia neonatorum are due to the gonococcus. The fact has a practical bearing, since the cases not due to the gonococcus get well quickly and with very simple treatment, and are rarely complicated with ulceration of the cornea.

In making the Italian translation Dr. Trombetta has added a good deal of matter. The insertions, which have been so printed as not to interfere in any material way with the continuity of the translation proper, contain many references to recent authors, mainly Italian, and various notes of interest and practical value. So far as we have noted, these additions have been judiciously made, and will doubtless enhance considerably the value of the book for the Italian students to whom it is addressed. But even to English readers they will be valuable in affording an index of the progress of ophthalmology in a land which has done so much to promote this science. The work done in Italy is not so well known to us in America as it should be, and to those who would know more of it Dr. Trombetta's little book will be an important guide.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the week ending March 16, 1906:

Smallpox—United States

Places.	Date.	Cases.	Deaths.
California—Los Angeles.....	Feb. 24-Mar. 3.....	5	
California—San Francisco.....	Feb. 24-Mar. 3.....	6	1
Delaware—Wilmington.....	Mar. 3-10.....	1	
Florida—Jacksonville.....	Feb. 24-Mar. 10.....	17	
Georgia—Augusta.....	Feb. 5-12.....	1	
Louisiana—New Orleans.....	Mar. 3-10.....	20	
Maryland—Baltimore.....	Mar. 3-10.....	6	
Massachusetts—Somerville.....	Mar. 3-10.....	1	
Michigan—Detroit.....	Mar. 3-10.....	3	
Mississippi—Natchez.....	Feb. 24-Mar. 3.....	2	
Missouri—St. Louis.....	Mar. 3-10.....	1	
North Dakota—Grand Forks Co.....	Jan. 1-31.....	1	
North Dakota—McHenry Co.....	Jan. 1-31.....	29	
North Dakota—Nelson County.....	Jan. 1-31.....	6	
North Dakota—Ward County.....	Jan. 1-31.....	1	
Ohio—Cincinnati.....	Mar. 2-9.....	8	
Tennessee—Memphis.....	Feb. 24-Mar. 3.....	3	
Tennessee—Nashville.....	Mar. 3-10.....	1	
Utah—Salt Lake City.....	Feb. 24-Mar. 3.....	16	

Smallpox—Foreign.

Brazil—Rio de Janeiro.....	Jan. 21-Feb. 11.....	13	3
China—Hongkong.....	Jan. 27-Feb. 3.....	2	2
Ecuador—Guayaquil.....	Feb. 4-18.....	10	1
France—Paris.....	Feb. 17-24.....	9	
Great Britain—Bristol.....	Feb. 17-24.....	1	
Great Britain—Leeds.....	Feb. 19-26.....	1	
India—Bombay.....	Feb. 6-13.....	9	
India—Calcutta.....	Jan. 27-Feb. 3.....	143	
India—Karachi.....	Feb. 4-11.....	12	
India—Madras.....	Feb. 3-9.....	22	
India—Rangoon.....	Jan. 27-Feb. 3.....	40	
Italy—General.....	Feb. 8-22.....	40	
Netherlands, The—Rotterdam.....	Feb. 17-24.....	1	
Russia—Moscow.....	Feb. 3-10.....	16	
Russia—Odessa.....	Feb. 10-17.....	3	
Russia—St. Petersburg.....	Mar. 3-17.....	15	
Spain—Barcelona.....	Feb. 10-20.....	4	
Turkey—Alexandretta.....	Feb. 10-17.....	20	

Yellow Fever.

Brazil—Rio de Janeiro.....	Jan. 21-Feb. 11.....	19	6
Ecuador—Guayaquil.....	Feb. 4-18.....	17	
Haiti—Port-au-Prince.....	Mar. 1-13.....	1	
Mexico—Merida.....	Feb. 18-24.....	1	

Cholera—Foreign.

Philippine Islands—Manila.....	Jan. 6-20.....	4	4
Philippine Islands—Pavones.....	Jan. 6-20.....	249	

Cholera—Foreign.

India—Calcutta.....	Jan. 27-Feb. 3.....	57	
India—Rangoon.....	Jan. 27-Feb. 3.....	2	

Cholera—Foreign.

Philippine Islands—Manila.....	Jan. 6-20.....	2	2
--------------------------------	----------------	---	---

Cholera—Foreign.

Brazil—Rio de Janeiro.....	Jan. 21-Feb. 11.....	10	3
India—Calcutta.....	Jan. 27-Feb. 3.....	31	
India—Rangoon.....	Jan. 27-Feb. 3.....	25	
Peru—Callao.....	Jan. 26-Feb. 12.....	1	
Peru—Cholisa.....	Jan. 26-Feb. 12.....	3	2
Peru—Moche.....	Feb. 14-21.....	1	
Peru—Trujillo.....	Jan. 26-Feb. 12.....	16	10

Public Health and Marine Hospital Service:

List of changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending March 14, 1906:

AMESSE, J. W., Passed Assistant Surgeon. Directed to proceed from Ellis Island, N. Y., to New Orleans, La., for special temporary duty in the State of Louisiana.

BOGGESE, J. S., Assistant Surgeon. Granted three days' leave, from March 12, 1906.

BURKHALTER, J. T., Passed Assistant Surgeon. Granted extension of leave of absence for ten days, from March 2, 1906.

GOLDBERGER, JOSEPH, Passed Assistant Surgeon. Granted leave of absence for twenty-one days, from April 11, 1906.

GOLDSBOROUGH, B. W., Acting Assistant Surgeon. Granted two days' leave of absence, from March 14, 1906.

KING, W. W., Passed Assistant Surgeon. Granted leave of absence for one month, from March 12, 1906.

RICHARDSON, N. D., Acting Assistant Surgeon. Granted leave of absence for thirty days, from March 7, 1906.

RUCKER, W. C., Assistant Surgeon. Relieved from temporary duty at Vineyard Haven, Mass., and directed to proceed to New Orleans, La., for special temporary duty in the State of Louisiana.

SMITH, F. C., Assistant Surgeon. Directed to proceed from Detroit, Mich., to New Orleans, La., for special temporary duty in State of Louisiana.

STEPHENSON, CHARLES W., Pharmacist. Granted leave of absence for thirty days, from March 12, 1906.

WICKE, H. W., Passed Assistant Surgeon. Granted leave of absence for two days, from March 16, 1906.

Boards Convened.

A board of medical officers was convened to meet at the Bureau, Washington, D. C., April 2, 1906, to determine the fitness for promotion to the grade of surgeon of certain Passed Assistant Surgeons. Detail for the board: Assistant Surgeon General W. J. Pettus, chairman; Assistant Surgeon General J. M. Eager, and Surgeon L. L. Williams, recorder.

A board of medical officers was convened to meet at Mobile, Ala., March 17, 1906, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: Passed Assistant Surgeon Edward Francis, chairman; Passed Assistant Surgeon S. B. Grubbs, recorder.

A board of medical officers was convened to meet at Chicago, Ill., March 13, 1906, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: Passed Assistant Surgeon G. B. Young, chairman; Passed Assistant Surgeon S. B. Grubbs, recorder.

A board of medical officers was convened to meet at the

Bureau, Washington, D. C., March 15, 1906, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: Assistant Surgeon General J. W. Kerr, chairman; Assistant Surgeon J. W. Trask, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army, for the week ending March 17, 1906:

DAVIS, WILLIAM B., Lieutenant Colonel and Deputy Surgeon General. Relieved from duty as Chief Surgeon, Department of the Columbia, and will proceed to New York, N. Y., for temporary duty at the Medical Supply Depot.

DAVIS, WILLIAM T., First Lieutenant and Assistant Surgeon. Upon arrival in the United States will proceed without delay to Washington Barracks, D. C., and report to the commanding officer of the General Hospital at that post for duty with Company A, Hospital Corps.

EGAN, PETER R., Major and Surgeon. Ordered to report in person to Major General James F. Wade, president of the Army Retiring Board, at Governor's Island, N. Y., for examination by the board, and upon completion of his examination will return to station, Fort Hamilton, N. Y.

HALLOCK, H. M., Major and Surgeon. Sick leave of absence extended thirty days.

KEEFER, FRANK R., Major and Surgeon. Leave of absence granted for thirty days extended one month.

PYLES, WILLIAM L., First Lieutenant and Assistant Surgeon. Left Jefferson Barracks, Mo., with recruits en route to the Presidio of San Francisco, Cal.

TORNEY, GEORGE H., Lieutenant Colonel and Deputy Surgeon General. In addition to his present duties, will, upon the retirement of Colonel John D. Hall, assistant surgeon general, report to the commanding general, Department of California, for duty as chief surgeon of that department, and also to assume the duties of medical superintendent, Army Transport Service, San Francisco, Cal.

WOODSON, ROBERT S., Major and Surgeon. Leave of absence extended ten days.

The following named medical officers have been relieved from duty in the Philippines Division, and ordered to proceed to San Francisco, Cal., and upon arrival to report by telegraph to the Military Secretary of the Army for further orders:

HANSELL, H. S., First Lieutenant and Assistant Surgeon.

SHAW, HERBERT G., Captain and Assistant Surgeon.

SHOCKLEY, M. A. W., Captain and Assistant Surgeon.

WOLFE, EDWIN P., Captain and Assistant Surgeon.

The following named medical officers have been appointed members of a board of medical officers to meet at the call of the president thereof at Manila, P. I., for the examination of such officers of the Medical Department of the United States Army as may be ordered before it to determine their fitness for promotion or advancement:

EBERT, RUDOLPH G., Major and Surgeon.

LA GARDE, LOUIS A., Major and Surgeon.

PURVIANCE, WILLIAM E., Major and Surgeon.

The following named assistant surgeons will report in person on Tuesday, May 8, 1906, to Major Louis A. La Garde, surgeon, president of the examining board, Manila, P. I., for examination to determine their fitness for advancement: First Lieutenants Wallace De Witt, Peter C. Field, George H. R. Gosman, R. B. Grubbs, P. H. McAndrew, Herbert G. Shaw, E. D. Shortlidge, R. M. Thornburgh, James W. Van Dusen, and George McD. Van Poole.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy, for the week ending March 17, 1906:

BAKER, M. W., Passed Assistant Surgeon. Detached from the naval hospital, Washington, D. C., and ordered to the naval hospital, New York, N. Y.

CHAPPELEAR, F. D., Acting Assistant Surgeon. Ordered to the naval hospital, Washington, D. C.

CONE, I. F., Assistant Surgeon. Appointed an assistant surgeon, with the rank of lieutenant, junior grade, from February 28, 1906.

DUNN, H. A., Passed Assistant Surgeon. Detached from the naval proving ground, Indian Head, Md., and ordered to the *Princeton*.

FLINT, J., Assistant Surgeon. Appointed as assistant surgeon, with the rank of lieutenant, junior grade, from February 28, 1906.

LANGHORNE, C. D., Surgeon. Detached from the *Denver*, and ordered home to await orders.

LUMSDEN, G. P., Surgeon. Detached from the *Olympia*, when put out of commission, and ordered to the *Minneapolis*.

MANCHESTER, J. D., Assistant Surgeon. Detached from the *Princeton*, and ordered home to await orders.

NORTON, O. D., Surgeon. Detached from the *Minneapolis*, and ordered home to await orders.

PLUMMER, R. W., Passed Assistant Surgeon. Detached from the naval recruiting station, St. Joseph, Mo., and ordered to the *Denver*.

SMITH, W. B., Assistant Surgeon. Detached from the *Olympia*, when put out of commission, and ordered to the *Hancock*.

Births, Marriages, and Deaths.

Born.

CARPENTER.—In Puget Sound, Washington, to Dr. Dudley Newcomb Carpenter, United States Navy, and Mrs. Carpenter, a son.

Married.

HARTWELL—BARBER.—In London, England, on Friday, March 9th, Dr. Harry Fairbanks Hartwell and Miss Olive Madeline Barber.

PARKS—ZOLL.—In Philadelphia, on Thursday, March 15th, Dr. Robert Roy Parks and Miss Johanna Sophia Zoll.

Died.

BACON.—In Hartford, Connecticut, on Friday, March 16th, Dr. William T. Bacon, aged sixty years.

BENEDICT.—In Weedsport, N. Y., on Thursday, March 8th, Dr. Fordyce H. Benedict, aged sixty-one years.

BOYER.—In Philadelphia, on Sunday, March 18th, Dr. A. H. Boyer, aged sixty years.

COBB.—In Philadelphia, on Saturday, March 3rd, Dr. Arthur R. Cobb, aged thirty-three years.

COOPER.—In Elkton, Maryland, on Saturday, March 10th, Dr. John W. Cooper, aged fifty-six years.

DERBY.—In New York, on Saturday, March 10th, Dr. Edward W. Derby, aged seventy-seven years.

ECKELS.—In Mechanicsburg, Pennsylvania, on Thursday, March 8th, Dr. William Eckles, aged seventy-three years.

FORTLAGE.—In Cleveland, Ohio, on Thursday, March 8th, Dr. Henry J. Fortlage, aged forty-eight years.

GEROLD.—In Bath, N. Y., on Thursday, March 15th, Dr. Lawrence J. Gerold, aged forty-four years.

HASBROUCK.—In Brooklyn, N. Y., on Friday, March 16th, Dr. Everett Hasbrouck, aged sixty-five years.

HENRY.—In Jersey City, N. J., on Friday, March 16th, Dr. John Powell Henry, aged forty-eight years.

HEWLETT.—In Newark, N. J., on Tuesday, March 13th, Dr. Peter V. P. Hewlett, aged fifty-nine years.

HIRSCHMANN.—In New York, on Thursday, March 15th, Dr. Leopold Hirschmann, aged thirty-five years.

LA TOURETTE.—In New York, on Thursday, March 15th, Dr. Jennie B. Allen La Tourette.

MACDONALD.—In Boston, on Thursday, March 8th, Dr. James Macdonald, aged seventy-three years.

NELSON.—In Minneapolis, on Saturday, March 10th, Dr. Hugh Nelson, aged sixty-three years.

PEARSON.—In Louisville, Kentucky, on Monday, March 12th, Dr. B. R. Pearson, of Montgomery, Alabama, aged sixty years.

ROTHE.—In Harrison, N. J., on Sunday, March 4th, Dr. Henry E. Rothe, Sr., aged sixty-five years.

SWILER.—In Mechanicsburg, Pennsylvania, on Thursday, March 8th, Dr. William E. Swiler, aged seventy-five years.

New York Medical Journal

INCORPORATING THE

Philadelphia Medical Journal and The Medical News

A Weekly Review of Medicine

VOL. LXXXIII, No. 13.

NEW YORK, MARCH 31, 1906.

Whole No. 1429

Original Communications.

SCOPOLAMINE-MORPHINE-CHLOROFORM ANÆSTHESIA.

By H. J. WHITACRE, B. S., M. D.,

CINCINNATI.

The very attractive results reported in the literature from the use of scopolamine in combination with morphine for the production of surgical anæsthesia, have led me to make an application of this method in forty cases.

This work was undertaken under the impression that scopolamine was a practically harmless drug which could be given without danger to the patient. A review of the fourteen deaths which had been reported in the articles read at this time, did not seem to justify a conclusion that the scopolamine was directly responsible for any of these deaths.

The observations upon my cases were conducted with the assistance of Dr. Mary K. Isham, who has reported our general results to the Cincinnati Academy of Medicine and published this report in the *New York Medical Journal*, November 25, 1905.

This paper deals with the literature of the subject, the nature and characteristics of the drug, and the reaction of patients to its use. I shall not therefore repeat the observations made regarding these points, except to state that barring irregularity in the action of the drug and some difficulties in the accurate application of the method, a vast majority of our patients enjoyed a freedom from the pre-operative and the postoperative discomforts which was certainly most gratifying. The profound reaction of our patients to the drug, the great increase in the pulse frequency of a very few patients, one death which was not a scopolamine death and the report of additional cases of death occurring in connection with the use of this anæsthetic, have raised in my mind the question of its safety. If the anæsthetic is safe there is abundant reason for its use in surgery; if possibly not, this question should be definitely determined. The dangers have certainly been sadly misrepresented on both sides.

I shall therefore confine my remarks to the dangers of the anæsthetic. First let us analyze the deaths which have thus far been reported from this anæsthetic:

1. Bloss (1) has reported a death as follows: A man, fifty years of age, presenting emphysema of the lungs, very marked pulmonary tuberculosis, cardiac degeneration and tumor of the intestine, pelvic tuberculosis with caries of the ilium and sacrum, incontinence

of fecal matter and albuminuria. An operation for resection of sacrum of the tuberosity of the ischium and ascending left branch of ischium was done. There was a great hæmorrhage during the operation. After operation the patient seemed to sleep tranquilly. Six hours afterwards he died through progressive enfeeblement. At the autopsy there was proved a pulmonary tuberculosis and an amyloid degeneration of the kidney and liver. It would seem most unjust to attribute this death to scopolamine.

2. Flateau (2) reports a death in a woman, fifty-two years of age, upon whom he performed an operation for ablation of a polyp of the uterus after incision of the neck. Sleep was profound during operation, which was perfectly borne, but four and one half hours afterwards some tracheal râles appeared, the pulse became rapid and feeble, respiration irregular, assuming the Cheyne-Stokes type. Acute œdema of the lungs developed and the patient died several hours after this happened. No autopsy was made. Flateau adds that the cause of death seemed rather an exhaustion which reached the third degree and degeneration of the heart due to the anæsthetic. The question naturally arises as to whether or not scopolamine was the cause of the œdema of the lungs.

Terrier and Desjardins (3) reason that the experiments of Guinard, of Lyon, which have shown that a patient must have either aortic or renal insufficiency in order to have acute œdema, would rather exclude the injections as a sufficient cause in themselves to produce this lesion. It is much to be regretted that an autopsy was not made in this case.

3, 4, 5. Dirk (4) reports three deaths, one in a woman, seventy-three years of age, who had a bad cancer of the rectum, had had a previous operative procedure and had an artificial anus. Two injections were used previous to a further operation. The other two patients were sixty-nine and seventy-six years of age. These also suffered from chronic ileus, the result of carcinoma of the rectum. In both of these cases a diffuse purulent peritonitis was present at the time of operation. All three patients developed after operation a comatose condition. The breathing was labored, resembling the Cheyne-Stokes type. The reflexes were fully lost, the pulse was small and delayed and death can be explained much more rationally in some other way than as a result of the use of scopolamine.

6, 7, 8. Israel (5) reports three deaths in 332 cases in discussing Dirk's paper. In the first case death occurred with the first cut of the skin in a patient who had taken 45 c.c. of ether. This patient had had anuria for eight days, was dark blue, and presented a most unfavorable case for any form of anæsthesia. Whether he could have lived with any other or without any anæsthetic the author does not state, but says that never before has he had a death during narcosis with other anæsthetics in anuria of even longer standing.

Terrier believes that it would be more logical and reasonable to place this death to the account of ether, which was absorbed by the patient at the moment of death, than to the account of scopolamine, which had been well born for several hours; furthermore, he states emphatically that ether and scopolamine are incompatible and that a gross error of technics was committed in this case. Most other observers do not support Terrier and Desjardins in this view, indeed, Kochmann¹⁵ believes that it is particularly indicated before ether narcosis, since the discomforts of ether are more marked than those of chloroform, second because it arrests secretion and thereby lessens the chances of pneumonia. He maintains that the hyperæmia of the respiratory mucosa after ether is purely secondary to hyperglandular activity, and that the use of scopolamine will prevent this hypersecretion even though it may dilate the blood vessels of this membrane. It must be granted that this was an extreme case and that the death might well have been explained otherwise by an autopsy.

Israel's second case was a patient to whom scopolamine had been given the day before operation, but through lack of time the operation was not performed. The same dose was given the next day with 18 c.c. of chloroform. He was a rather weak man with unilateral tuberculosis of the kidney and no complicating lesions in the other organs. The operation went smoothly, but afterwards there was a striking restlessness and a pulse frequency of 120. This condition of restlessness and high pulse without fever and without disturbance of kidney function continued for three days, then, on the fourth day he fell out of bed in his restlessness, lost consciousness and died on the same day. Autopsy showed no tuberculous disease in the other kidney, no wound trouble, but a very flabby, yellow colored heart with high degree of fatty degeneration of the papillary muscles, fatty liver, and an acute cloudiness and swelling of the remaining kidney.

Israel's third case was very similar. The patient was a young, unusually strong woman, who entered the hospital with peritonitis due to ruptured pyosalpinx. Scopolamine and morphine injections were given together with 25 c.c. of chloroform. At operation a moderate peritonitis was found. In the first twenty-four hours the progress was excellent; there was no vomiting. During the second twenty-four hours there was the same condition of restlessness that has been described in the previous case. In the third twenty-four hours there was a condition of drowsiness, coma, analgesia, strong contraction of the pupils, and minimum secretion of urine—40 c.c. in twenty-four hours. The patient died on the fourth day. On autopsy extreme fatty degeneration of the kidney, liver, and heart was found, with no swelling of the spleen. The autopsy findings were exactly those of extreme phosphorus poisoning. The condition of the spleen and peritoneal cavity rule out sepsis.

At this point I should like to report the only death in our series of forty cases, which occurred in any connection with the anesthesia. This occurred in a school-boy, aged fifteen, who was first seen four days after the beginning of an attack of acute appendicitis with rigidity of right abdomen, temperature of 102°, pulse of 110, and a typical history. It was deemed wise to wait a few days before operating. The temperature became almost normal after six days of complete rest and the local symptoms improved. On the tenth day the temperature again began to rise and a localized abscess was diagnosticated. Two injections of scopolamine 0.01 grain and morphine $\frac{7}{8}$ grain were given two and one half and one half hour before operation

and six drachms of chloroform were used during the operation to complete the anesthesia. An anterior incision was made; an abscess containing perhaps two ounces of pus was drained posteriorly, the appendix was removed and patient put to bed in good condition with posterior drainage. The pulse was 80 and 84 before scopolamine, and 80 after the use of the drug, it increased somewhat during operation and was 118 when he was returned to bed. A three hourly record of the pulse after operation reads, 100, 98, 86, 84, 80; respiration during this entire period varied from 20 to 24. During the next twenty-four hours the general appearance of the patient was not satisfactory. He seemed to be dull and listless, his temperature was 96.8°, pulse 84, respiration 18, but liquids were taken and there were absolutely no symptoms of peritonitis or wound trouble. During the third twenty-four hours the condition of listlessness grew more marked; he slept a great deal, was very pale and looked badly; temperature remained subnormal; the pulse ranged from 72 to 92. At the end of the third day temperature rapidly came up to 100°, later to 102.4°. On the evening of this day the patient was taken to the operating room with a pulse of 120 and temperature of 102°. No symptoms of peritonitis were apparent, but a puncture incision was made above the pubes for pelvic drainage if pus should be found. The peritoneal cavity was normal, however, and wound conditions were satisfactory. The patient died in coma at three o'clock the next morning with all the symptoms of profound intoxication. Unfortunately, the urine was not examined for acetone. On post mortem examination the wound conditions were found satisfactory. The liver was flabby and very yellow, and the kidneys presented a similar appearance. Permission was not granted for a complete autopsy and the heart was not removed. On microscopical examination an acute yellow atrophy of the liver, extreme fatty degeneration of the kidney and of the intestinal mucosa was found.

Here are three deaths from fatty degeneration of the parenchymatous organs which have occurred after the combined use of scopolamine and chloroform. In view of the valuable work reported by Bevan and Favill (6), Guthrie (7), Fraenkel (8), Offergeld (9), Müller (10), and others upon the occurrence of late poisonous effects after the administration of chloroform, manifested chiefly in a fatty degeneration of these organs, it seems to me but just that we should attribute these deaths to this well established cause, and not to the scopolamine used.

I have instituted animal experiments for the study of this question, but, unfortunately, cannot give more than a preliminary report at the present time. I have repeated the experiments of Offergeld and Müller, and fatty degeneration has regularly followed the prolonged administration of both chloroform and ether. One interesting point was developed. At least some of our animals have developed a fatty degeneration of the liver, when chloroform was used, and of the kidney, when ether was used, but not of any other organs.

In order to study the effect of scopolamine and of morphine and scopolamine in combination, upon the anatomical integrity of the parenchymatous organs, ten animals, (dogs, cats and guinea pigs), were given repeated doses of scopolamine 0.01 grain for eight to fourteen days. Most of these animals showed marked degenerative changes in some degree and five showed distinct fatty degeneration of the liver and kidney, two a probable fatty degeneration of the heart.

Ten animals (dogs, cats and guinea pigs) were given scopolamine 0.01 grain in combination with morphine $\frac{1}{8}$ grain for corresponding periods of time. Most of these animals showed degenerative changes in the parenchymatous organs. Five showed fatty degeneration of the kidney and of the liver. While these animal experiments show a fatty degeneration of the liver and kidney after continued doses, further experimentation will be necessary to demonstrate that one, two or three doses would produce a like effect. It seems to me improbable. It certainly is true, however, that both plain scopolamine and the combination of morphine and scopolamine will produce this effect in continued doses. It is possibly true that the administration of this drug to the patient suffering from such degenerative changes of the organs, might increase or precipitate this degenerative change.

Israel has suggested and Landau (14) has repeated the suggestion, that the combination of scopolamine with morphine may inhibit the excretion of chloroform from the system and that the retention of even a small dose of chloroform for a long period will produce the fatty degeneration. It would probably be difficult to study the process of excretion from the liver, but our series of cases seemed to show a larger excretion of urine after this form of anaesthesia than usually occurs after the administration of pure ether or pure chloroform. Orth has expressed an opinion on Israel's cases that the fatty degeneration was the result of the use of scopolamine. The fact remains that these patients have suffered a lesion precisely similar to that which has followed the administration of chloroform alone in no greater amount, and the lesion is now looked upon as the definite result of chloroform poisoning. I shall therefore class these deaths among late poisonous effects of chloroform.

9. Wild (11) has reported a case, which for purposes of complete discussion should be included among the deaths. This case of empyema of the antrum was given 0.001 gramme of scopolamine and 0.06 gramme of morphine, and forty-five minutes later a second dose of one half the amount of each drug. Sleep was not induced and anaesthesia was completed by means of 45 c.c. of ether. The pulse was 116, breathing 12, later 10 per minute. After operation the patient slept, reacted to calling, the breathing was irregular, 10 per minute, and the face was cyanotic. Two hours later the breathing took on a type which resembled Cheyne-Stokes respiration. In a period of fifteen seconds there were 7 to 9 superficial respirations, then a pause of fourteen to fifteen seconds, then again a superficial breathing. It differed from Cheyne-Stokes respiration in that all respirations were of equal length and depth. During breathing the pulse was full and strong; with a pause it became smaller and slower, and disappeared almost entirely. Calling and shaking did not awake the patient. The chin dropped backward, but the dragging of the jaw forward and the pulling on the tongue did not influence respiration. Three hours later there was a change for the worse, the patient looked grayish white, had the appearance of one dead, could not be aroused, had rattling breathing and pulse was practically gone. The pupil was widely dilated, the cornea glassy, and all reflexes were gone. Through artificial respiration, camphor injections, salt solution and Faradization for one hour, the pulse, breathing and reflexes began to return. The condition steadily improved and at one o'clock that night the patient awakened as from a deep sleep. He fully recovered.

A lung affection did not result, which would seem to rule out the question of inspired blood. It will be noted that this patient received 0.015 gramme of scopolamine and 0.09 gramme of morphine, a large dose.

It is a well known fact that symptoms of poisoning have followed the use of 0.25 or even 0.1 grain morphine. This patient received $1\frac{1}{8}$ grains morphine in forty-five minutes. The symptoms are furthermore those of morphine poisoning and should not be attributed to scopolamine.

10, 11, 12. Bakes (12) in 300 cases of scopolamine-morphine anaesthesia lost three patients.

The first case, a patient eight years old, had extensive old osteomyelitis of the femur. One hour before the operation the patient received 0.005 gramme scopolamine and 0.15 gramme morphine. He also received 30 grammes ether. There was a great haemorrhage at the time of operation and salt infusions became necessary. Towards the end of the operation the pulse became more and more frequent, all stimulation failed to cause improvements and the patient died. Autopsy revealed widespread amyloid degeneration of the heart and all of the parenchymatous organs.

His second death occurred in a patient suffering from extensive carcinoma of the uterus, which was extirpated according to Wertheim. One dose 0.001 gramme scopolamine and 0.275 gramme morphine was given one hour before operation. Later 308 grammes ether were administered. In removing the cancerous glands the iliac vein was excised. From this on the pulse changed for the worse, became 120 to 130, and in spite of all stimulation the patient died one hour later from heart weakness. Both of these patients, it seems to me, were desperate cases, which would have died under any anaesthetic and should be classified as death from shock and haemorrhage.

Bakes's third case cannot be so readily explained. This occurred in a woman, sixty years old, who was robust with an apparently sound heart. One hour before operation 0.008 gramme scopolamine and 0.02 gramme morphine were given and 60 grammes ether were administered later. A sarcoma of the neck, the size of a child's head, was excised. The common jugular vein and external carotid artery were removed. The loss of blood was slight, and at close of operation pulse was good. Nobody thought of a bad result. The operation was large, but not incompatible with life. After operation there appeared gradually signs of heart weakness, and in spite of everything that could be done, the patient died four hours after operation. There was no wound bleeding and no nerve inclusions. An autopsy was refused.

13. Landau (14) reports a death which was very similar. This occurred in a man, sixty-six years old, with moderate arteriosclerosis who was operated upon for haemorrhoids which had given him pain for several years, but had bled only in the usual way for a few days before operation. There was no anaemia. Two hours before operation 0.009 gramme scopolamine and 0.02 gramme morphine were given, and induced deep narcosis. Four internal haemorrhoids, of the size of a hazel nut, were excised after the injection of 0.03 gramme cocaine at the base. There was very little haemorrhage, and the wounds were sutured; the veins were not thrombosed and a tampon was inserted. The patient awakened one hour after the operation, was restless, complained of pain and threw himself about. The pulse during the operation was very good. There was no more cyanosis than is usual. Two and one half hours after operation there was a sudden heart collapse which slowly yielded to stimulation. One half hour later the pulse again became very weak, and in spite of all stimulation the patient died with a picture of heart failure. No autopsy was made.

He states that the sceptic will think of thrombosis of the coronary artery or embolus from the wound, but he refers to the distinctness of the symptoms as those of a toxic heart failure.

14. Dr. J. C. Sexton (13), of Rushville, Ind., recently reported a death following scopolamine-morphine injection.

This patient, aged forty-seven, had been in poor health for five years, principally on account of excessive bleeding of the uterus from uterine fibroids. She was anæmic, poorly nourished and weak. The heart was weak, but gave no murmur. The pulse rate was 100. She had a fair appetite, but feeble digestion and was habitually constipated. The urine was normal. Her hæmorrhage was distinctly menstrual, but had been excessive for five years. She received 10 grains trional for sleep on two nights previous to operation. Her menstruation came on the night before operation, the flow was free, but not alarming. Scopolamine 0.001 grain and morphine $\frac{1}{8}$ grain were given hypodermatically at 7.30 a. m. In fifteen minutes she was sound asleep. In thirty minutes she was completely unconscious, slightly cyanosed, pulse 120 and throbbing, respiration 20, but very shallow. The abdominal and intercostal muscles were rigid, the pupils contracted, the jaw dropped backward, the mouth was open, and the eyeballs turned up. Both the heart and lungs were failing, stimulation and artificial respiration were vigorously applied; the pupils dilated. One and one half hours after the injection the respirations became very feeble and one and three quarter hours after the injection the patient died, the heart continuing to beat after respiration ceased. The post mortem examination was superficially made and showed nothing of importance on naked eye observation of the abdomen.

Sexton explains the death as due to acute cerebral anæmia produced by (1) the effect of trional, (2) the effect of pelvic engorgement, and (3) the effect of the drugs administered thus to a patient especially predisposed to it.

In four cases, (those of Bakes, Landau, Sexton and perhaps that of Flateau), the death of the patient seems to be so definitely connected with the administration of scopolamine and morphine that there is reason to believe that this anæsthetic had something to do with the deaths. Unfortunately, we have no autopsy report from three of these patients and in the fourth, autopsy was incomplete. While this fact alone will cast lasting doubt upon the exact cause of death, it seems to me that if we have a mortality from this anæsthetic it is represented by these four cases. The question remains as to how this narcosis has caused death in these cases, whether the dose of one or the other alkaloid, whether the combination of the two or the combination of one of these with chloroform and ether.

Scopolamine, or hyoscine, has not been looked upon as a highly toxic drug and is given with great frequency in the practice of medicine. When injected in even large doses in my animal experiments over a considerable period of time it has not produced the slightest change in the well being of the animals. They have eaten well and shown every evidence of perfect health. As has already been stated, however, many of these animals have developed degeneration in the parenchymatous organs.

Morphine, as is well known, acts favorably in single or repeated doses, both alone and in combination with the other anæsthetics except for the

idiosyncracies. As is well known the life of the morphine habitué is not shortened, perhaps lengthened by the use of this drug. When the two drugs are combined, however, in a dose too small to produce any marked effect, if used alone, a deep sleep lasting for many hours with profound analgesia results. I am entirely unable to explain the powerful effects of this combination. The results obtained by the combination of the two drugs are at the same time extremely variable in a fairly healthy human subject, much more variable in the diseased. Neurasthenics and nervous people as well as those suffering from disease of the heart muscle, are particularly subject to its deleterious effects. This has been brought out by clinical experience and by the experiments of Kochmann (15), who found that two animals who had just recovered from an illness (flogging and acute lead poisoning) died after a dose of 0.1 gramme scopolamine from respiratory paralysis, while a healthy animal was not effected by 1.5 grammes.

Kochmann believes that deaths are caused by a depression of the blood pressure through damage to the excitomotor apparatus of the heart. Landau explains all of the deaths as occurring from heart failure, the result of profound alkaloidal toxæmia.

In a study of my clinical cases I have not found a severe reaction upon either the pulse or the heart in a considerable proportion of them. The pulse has been, as a rule, increased after the injection of scopolamine, but was usually of good quality throughout the operation, stimulation has not been needed in the further progress of any case, and the pulse has gradually returned to normal within a period determined largely by the nature of the operative procedure.

In two patients the pulse reached the rate of 150 per minute, in one case 160 per minute, but these were cases of extremely nervous boys who suffered severe sepsis and whose pulse had ranged high previous to the operation. The third patient suffered from fracture of the pelvis and ruptured urethra and entered the hospital with a pulse ranging from 120 to 130. In a majority of the patients the pulse ranged from 70 to 116 and was usually below 100 and of good quality. The respirations have shown no noteworthy alterations in our series of cases, but attention is called to the fact that the heart continued to beat after respiration had ceased both in Sexton's case and in Kochmann's animal experiments.

There is still another point of danger to be considered. Scopolamine often contains many isomeric bodies, some of which are very harmful, and it perhaps often happens that we not only do not obtain the physiological antagonism which is expected from these drugs, but the patient suffers from the poisonous effect of such bodies as atropine. We are told that this is not to be avoided even with great care. This question of antagonism in the two drugs does not seem entirely clear. The collected experience would seem to indicate that when given alone these drugs are safe, but that when combined in even moderate pharmacopœial doses they may become dangerous. A point of some importance in this connection is the demonstrated tendency of scopolamine to rapidly lose its power after it is placed in solution, indeed, we have noted

a definite deterioration in crystals which were repeatedly exposed to air and light. A solution more than three days old should not be used.

Conclusions.

(1).—Scopolamine-morphine narcosis is not devoid of danger.

(2).—The use of scopolamine and morphine alone for surgical narcosis is not justifiable and in my experience is not practicable.

(3).—A single dose two hours before operation lessens the discomforts attendant upon the operative procedure to a high degree, and may obtain a definite place in surgical practice.

(4).—Four deaths have occurred in a series of 2,400 cases, which have been so definitely related to the use of this method of narcosis that they may be called scopolamine deaths. This, however, in the absence of an autopsy demonstration.

(5).—These deaths have been reported as occurring with a type picture of alkaloid poisoning, and heart failure has been given as a direct cause of death. (Landau.)

(6).—A fatty degeneration of the liver and kidney has been produced by the use of repeated doses of scopolamine alone and of scopolamine in combination with morphine, in animals.

(7).—This method of producing or assisting narcosis cannot yet be recommended for use in general practice in spite of the great advantage it seems to offer. (Kochmann.)

Bibliography.

1. Bloss-von Bruns. *Beiträge zur klinischen Chirurgie*, xxxv, 3.
2. Flatau. *Münchener medizinische Wochenschrift*, 1903, No. 28.
3. Terrier and Desjardins. *La Presse médicale*, March 4, 1905.
4. Dirk. *Deutsche medizinische Wochenschrift*, 1905, No. 10.
5. Israel. *Ibidem*.
6. Bevan and Favill. *Journal of the American Medical Association*, September 2, 1905.
7. Guthrie. *Lancet*, August 26, 1905.
8. Fraenkel. *Virchow's Archiv*, 1892, cxxvii, cxxix.
9. Offergeld. *Archiv für klinische Chirurgie*, 1905, lxxv, p. 758.
10. Müller. *Ibidem*, p. 876.
11. Wild. *Berliner klinische Wochenschrift*, 1903, No. 9.
12. Bakes. *Langenbeck's Archiv*, lxxiv, 4.
13. Sexton. *Lancet-Clinic*, lv, November 18, 1905.
14. Landau. *Deutsche medizinische Wochenschrift*, 1905, No. 28.
15. Kochmann. *Münchener medizinische Wochenschrift*, 1905, No. 17.
16. Ziffer. *Monatschrift für Geburtshilfe und Gynäkologie*, xxi, 1.

132 HUNTINGTON PLACE, MOUNT AUBURN.

REMARKS ON SOME GENERAL INFECTIONS THROUGH THE TONSIL.*

By ISAAC ADLER, M. D.,

NEW YORK.

It is now generally conceded that the faucial tonsils may serve as portals of infection for a number of diseases. Acute articular rheumatism, endocarditis, pleurisy, acute osteomyelitis, actinomycosis, various forms of general sepsis, nephritis, and tuberculosis have been traced with more or less certainty, to the tonsils as their starting point. Typhoid fever, it has been suggested, might possibly origi-

nate from there. Even appendicitis has been referred, as to its origin, to tonsillar infection.¹

It cannot be the purpose of this paper to enter into a critical discussion of the relation of the tonsils to all of the diseases just mentioned. It is proposed merely to emphasize a few points which may possibly be of some practical interest, and carefully avoid all theoretical speculation.

That the tonsils offer under certain conditions a convenient passage for all sorts of infectious material into the lymph and hence into the blood current, may now be considered a certainty. Stöhr² has conclusively shown that an abundant emigration of leucocytes is constantly taking place from the deeper tissues through the tonsillar epithelium into the oral cavity. The clefts and spaces formed in the epithelial layer by the transit of a leucocyte frequently remain open, thus forming, as Stöhr believes, a convenient door for infective material to enter. Hodenpyl³ has proved by experiment that while bacteria cannot penetrate the sound epithelial covering of the tonsils, they will readily pass into and through the tonsillar tissue wherever the epithelium has given way. Ribbert⁴ has come to the same conclusion. Goodale⁵ has shown that foreign bodies, carmine for instance, readily pass through the hypertrophied tonsil. If we consider further that an abundant flora of pathogenic and nonpathogenic bacteria is normally found to cover the tonsils, that the crypts and lacunae usually contain more or less disintegrated and decomposing material, and if we consider also the intimate connection between the tonsil and the lymph channels it becomes quite obvious that all the necessary factors of an infection are given. Indeed, it may well be asked, why there is not a more or less constant infection taking place from the tonsil and why every case of tonsillitis is not a source of the greatest and most malignant systemic disturbance. It is evident that there must be powerful defensive apparatus.⁶ Just what these defensive mechanisms may be is by no means satisfactorily ascertained.

No doubt individual variations in the structure of the tonsil and the resisting power and disposition of the epithelium as well as the reactive vigor of the leucocytes are exceedingly important factors. But there are probably many more, both physical and chemical, of which as yet we have no idea. Why many individuals go through a whole long life without ever having the slightest tonsillar trouble, while others appear to suffer on the very slightest provocation, opens up the old question of individual disposition and immunity. In this connection it would be of the greatest value for human pathology if it could be ascertained why the lower animals are apparently immune to tonsillar affections. The dog and cat, for instance, are by no means dainty as regards the things they swallow. Their oral and pharyngeal cavities are constantly flooded with the most infectious material, nevertheless, decayed teeth and stomatitis are extremely rare and tonsillitis in these animals practically does not occur. A study

¹ Apolant: *Therapeutische Monatshefte*, 1897, No. 2.

² W. Meibohm: *Medical Record*, 1903, May 16th.

³ *Archiv für klinische Chirurgie*, vi, 97, 1884.

⁴ *American Journal of the Medical Sciences*, March, 1891.

⁵ *Deutsche medizinische Wochenschrift*, 1887-8.

⁶ *Archiv für Laryngologie*, vii, 1.

⁷ Wood: The Functions of the Tonsils. *University of Pennsylvania Medical Bulletin*, October, 1904.

*Read before the New York County Medical Association, November 20, 1905.

of the defensive mechanism in these animals would be of the greatest importance.

By far the most frequent infection of tonsillar origin is rheumatism. Although many practitioners still cling to the superstition concerning the rôle of uric acid in the pathology of rheumatism, it has, I think, been satisfactorily proved that acute articular rheumatism is a bacterial disease depending upon infection, probably with some species of streptococcus. That this infection enters the system in a large number, possibly in the majority of cases through the tonsils, that acute articular rheumatism, endocarditis, pleurisy, and many other forms of streptococcus disease are thus introduced, is at present a generally accepted fact based upon a large literature and much accurate observation. It is worthy of notice that Trousseau⁷ has already described an *angina rheumatica*.

What I wish particularly to emphasize is that the rheumatic infection need not necessarily be introduced by the common form of follicular tonsillitis with more or less high temperature, considerable swelling of the tonsils, great pain in deglutition, etc. On the contrary, it very often appears as if an intense inflammatory reaction served rather as a preventive of general systemic infection. It has been demonstrated that under favorable conditions even quite virulent microbes can pass through the tonsillar portals without reactionary or inflammatory changes in the tonsillar tissue itself. Hodenpyl and others have demonstrated that the thin layer of epithelium in the interior of the crypts is most easily and most frequently damaged and affords a ready passage for infective material into the lymph channels. Accordingly we find more frequently than is generally recognized, that merely a very slight tonsillar irritation is the precursor of more or less severe rheumatic or septic systemic infection. The patient has none of the usual signs of acute tonsillitis; no fever nor general systemic symptoms, no swelling or enlargement of the tonsils, the pain in deglutition is very slight, so slight indeed as to pass almost unnoticed and only recalled by an effort of memory. Inspection of the tonsils shows possibly merely some hyperæmia around some of the crypts and usually it is only one tonsil that is affected. This form of tonsillitis, the *angina fossularis* of German authors, is, it seems to me, not sufficiently recognized in its clinical importance as the frequent starting point of severe and even fatal systemic infections.

The importance of this fact can hardly be overestimated. All through the literature on the subject of infection through the tonsils we find observations directed mainly to the usual form of tonsillitis of a febrile type, while these apparently quite innocuous and insignificant lesions, but in reality and in their sequelae more grave and harmful than the ordinary follicular tonsillitis, are, as a rule, overlooked by the patient as well as by the doctor. In a recent publication Gürich⁸ contributes some novel views as

to the relation between affections of the tonsils and rheumatism. According to him, minute pus foci in the depths of the tonsillar crypts tend to maintain a permanent infection which is evidenced by the frequent relapses to which patients suffering from articular rheumatism are subject. He claims to have demonstrated this in a great many of his cases. The anterior pillar is drawn aside, the apparently quite normal tonsil is pulled out, then with a specially devised probe he plunges into the crypts and lacunae and very often succeeds in this way in obtaining a discharge of pus. In every case where pus is found Gürich recommends deep scarifications of the tonsil and professes by this method not only to have prevented further recurrences of rheumatic attacks, but to have actually cured many cases of acute articular rheumatism in a surprisingly short time. The slashing of the tonsil recommended by this author is perhaps not entirely safe and better methods will probably suggest themselves, but the principle here brought forward assuredly merits careful and impartial investigation.

Muscular rheumatism still occupies a somewhat different position than the articular type. For many reasons, theoretical, clinical and anatomical, and upon which it is needless to enter here, I personally am convinced that muscular rheumatism is also a bacterial infection with some microbe, possibly a highly attenuated streptococcus. Of course, this has never been proved, though much experimental work by myself and by others has been done in that direction. The difficulties in the way towards a satisfactory clearing up of this complex subject seem at present almost insurmountable. But, be that as it may, special attention devoted to this subject for many years has convinced me that many cases of muscular rheumatism are of tonsillar origin. It is a fact not sufficiently appreciated that the muscles of the neck, and in a somewhat less degree, the muscles of the shoulder, are a favorite localization of chronic rheumatic muscular induration. These indurations are usually confined to one side of the neck. The acute onset is almost invariably preceded or accompanied by an attack of the fossular tonsillitis mentioned above. The patient has slight pain on swallowing and some uncomfortable sensations in the throat, seldom lasting more than a day, often only a few hours. The next day he has a stiff neck. This passes off and the incident is forgotten. These little attacks repeat either in the same muscle or in others until chronic muscular indurations, sometimes very extensive, are fully matured, with all the ensuing pains and discomforts, the severe headaches and migraines and all the other sequelae which cannot be entered into here.

Just in passing permit me to state that it is quite probable that certain forms of pneumonia, streptococcus pneumonia as well as pneumococcus pneumonia, have their origin in infection through the tonsil. We know that pneumococci are frequent inhabitants of the normal tonsil. W. Pasteur⁹ has recently reported a case of pneumococcus sore throat. There is a direct lymph route from the tonsil to the pleura and thus indirectly to the lung, by means of which tonsillar infection may well cause pneumonia. There is also good reason for believing that in many cases the pneumonic consolidation of

⁷ *Chronic de l'Inflam-Dieu*, 1866, i, p. 355 (German translation).

⁸ Buss: *Acuter Gelenk Rheumatismus von den Tonsillen ausgehend*, *Deutsches Archiv für klinische Medizin*, liv, 1896.

⁹ St. Clair Thomson: *Rheumatic Fever in Relation to the Throat*, *Laryngoscope*, January, 1901.

¹⁰ Cobb: *Septic Rheumatism of Tonsillar Origin*, *Annals of Gynecology and Pediatrics*, 1901.

¹¹ F. A. Packard: *New York Medical Journal*, 1899.

¹² *Verhandlungen des Congresses für innere Medizin*, 1905, p. 418.

¹³ *Lancet*, 1905, p. 1409.

the lung is merely a secondary localization of a primary and general streptococcus or pneumococcus sepsis which again can readily take its origin from tonsillar infection.

It is now well known that general and severe septic infection may take its origin from tonsillar disease. Jessen¹⁰, A. Fraenkel¹¹, and Denig¹², have reported interesting cases of general and fatal sepsis following tonsillitis. In most of these cases there were tonsillar abscesses; sometimes, as in Jessen's patient the abscesses were extremely small and of a miliary type. The surface of the tonsils was perfectly smooth and did not indicate the presence of pus below. Jessen writes that if he had not by some good fortune been able to observe the case from the very beginning, if he had seen this patient two days later than he did, nothing would have caused him to suspect the tonsil and he would have been compelled to classify his case under the heading of cryptogenetic sepsis. He suggests in similar cases to put an aspirating needle into the tonsil in order to ascertain the presence of pus. In a case reported by Fraenkel as well as one reported by Heubner and Bahr¹³ the faucial abscesses were not recognized during life at all, as there were no subjective symptoms nor any visible lesions pointing to the presence of pus in the faucial region. In this connection I would again call attention to the fact that the gravest general septic infection may take its origin from the tonsil without the formation of tonsillar or peritonsillar abscesses and without any great anatomical tonsillar lesion. The following case may serve to illustrate this:

A healthy baby, one year old, is suddenly taken with high fever (105°). Careful examination shows nothing. The next day a very slight follicular tonsillitis becomes apparent. The tonsils are not swollen but show merely a moderate congestion of a few very small follicular patches. No pseudomembranes are formed nor is there any glandular involvement. Within 48 hours of the onset of the fever the urine becomes loaded with albumin and contains numerous renal epithelia and casts of all kinds and a few red blood cells. The high fever continues, the curve being of a distinct septic type. The spleen gradually enlarges, profuse diarrhoeas set in. The tonsils have long since become perfectly normal; no other organic lesions are evident. With the fever varying in intensity but always of a strongly remittent character and with steadily increasing weakness the child dies of exhaustion after three weeks. The autopsy showed intense nephritis with multitudes of microscopic pus foci. In the small intestine, particularly the ileum, localized ulceration with necrosis. The spleen enlarged and congested in a condition of acute inflammation. The liver shows some fatty degeneration and beginning focal necrosis. There is no endocarditis; a very moderate congestion of the lung and some bronchitis. The spleen and the heart blood gave staphylococcus aureus in pure culture. From the kidneys, besides abundant colonies of staphylococcus, the colon bacillus was also obtained. The Widal reaction had proved negative during life and typhoid bacillus could not be cultivated from the stools nor could it be obtained from the intestines after death. There appears no reason to doubt that the

staphylococcus entered the system in this case through the tonsil and that so very slight a tonsillitis as we saw here was sufficient to cause a fatal general sepsis.

While streptococcus infection, originating from tonsillar or pharyngeal disease, is of comparatively frequent occurrence, the general infection with staphylococcus through the faucial organs is, according to Lenhartz¹⁴ very rare. He himself has seen only a single case. Kocher and Tavel¹⁵ point out that while infections with staphylococcus originating from mucous membranes are extremely rare, they are, when they do occur, of the most virulent type. The following case of general sepsis, as sequela to an apparently very simple attack of tonsillitis, may also be briefly mentioned:

On March 17th of this year I saw in the practice of Dr. Rapp, of this city, a young man, 25 years of age, with the following history: He had never had any serious illness; had always been perfectly healthy. He lived out of town and came to this city to be married, in fact, the wedding was to take place in a very few days. Shortly after his arrival he complained of sore throat, to which at first he paid little attention until the fever and general malaise compelled him to keep in bed. When I saw the patient he had high septic fever, slightly enlarged spleen but no definite organic lesion. The pulse was very rapid, between 120 and 130. No murmurs of the heart, no involvement of the lungs. There was a slight albuminuria with some hyaline and granular casts. The tonsils were slightly congested but neither painful nor enlarged; there was no glandular involvement, no pseudomembranous deposit, no evidence of pus. The blood, except a very moderate leucocytosis, showed nothing abnormal; a blood culture proved negative. The man died after a few days without, as far as I could learn, any further localizations having developed. Autopsy was not obtainable. Though the absolute proof which alone a post mortem investigation could furnish is lacking in this case, there is hardly room for doubt but that the general infection most probably by streptococcus, was brought about by the very mild tonsillitis.

Jessen raises the question whether there is any distinguishing feature by which a tonsillitis leading to severe general infection may be recognized, as distinguished from the common, more harmless form of the disease. Jessen asserts that there is and believes that those forms of tonsillitis which do not exhibit the follicular type, but in which the exudate is deposited in strips along the tonsil are the ones which most frequently lead to general systemic diseases. Only a few days ago I had occasion to see a case which illustrates this, in the practice of Dr. I. Stein of this city:

A woman of about 40, up to now entirely healthy, is suddenly taken sick with sore throat, high fever up to 104° and the general symptoms usually associated with this. When I saw the case there was continuous high fever, rapid pulse, great prostration and rapid breathing. The faucial tonsils were much swollen and congested and there was a thin, grayish pseudomembranous exudate in long strips covering the tonsils and extending somewhat over the posterior pharyngeal surface. The cervical glands were but slightly enlarged. The rather scant urine contained a moderate quantity of albumin and casts, besides plentiful epithelium. There was considerable cough, some sputum slightly rusty and at the base of the right lung a patch of recent consolidation with bronchial breathing, increased voice

¹⁰ Ueber die Tonsillen als Eingangspforte für schwere allgemeine Infektion. *Munchener medizinische Wochenschrift*, 1898, No. 23.

¹¹ Ueber septische Infektion im Gefolge von Erkrankungen der Rachenorgane. *Zeitschrift für klinische Medizin*, VII, p. 11, 1888.

¹² Kryptogenetische Sepsis. *Munchener medizinische Wochenschrift*, 1897, No. 41.

¹³ Zur Kenntniss der Gelenk-Eiterung bei Scharlach. *Berliner klinische Wochenschrift*, 1884, No. 41.

¹⁴ Lenhartz: *Die septischen Erkrankungen*, p. 272.

¹⁵ Kocher and Tavel: *Vorlesungen über chirurgische Infektionskrankheiten*, 1895, p. 125.

fremitus and numerous moist râles. A culture taken from the tonsillar exudate showed streptococci which were also abundant in the sputum. No pneumococci were found.

This peculiar arrangement of the tonsillar exudate is no doubt in many cases significant as leading to general systemic infection, but it is by no means necessarily pathognomonic. We have seen that follicular or fossular tonsillitis with little or no local reaction, without any pseudo-membranous deposits, and, as far as the tonsils are concerned, of the mildest possible type, may lead to the gravest and even fatal systemic lesion.

A point to which I would like to call special attention is the relation of tonsillitis to nephritis. When nephritis is spoken of in this connection one usually thinks of acute nephritis with all the classical symptoms, scant, sometimes bloody urine, even complete anuria, general oedema, convulsions, the urine containing large quantities of albumin, casts and abundant red blood cells. Quite recently Morse¹⁶ reports four such cases in connection with simple follicular tonsillitis and in which scarlet fever could positively be excluded. Similar cases have been reported by others, although on the whole these sequelae of tonsillitis do not occur very frequently.

But there is another form of nephritis to which but little reference is made in literature and which does not appear to be at all recognized by practitioners, but which is very common indeed. I am not prepared to give exact figures, but fully believe that it occurs in at least seventy-five per cent. of all cases of pure tonsillitis, not including, of course, scarlatina or other infectious disease. Leyden¹⁷ called attention to this long ago. Unless the physician makes it a point to look for this nephritis no clinical manifestations will direct his attention towards it, as there are no symptoms. The urine as a rule is secreted in sufficient quantities and is not more scant or highly concentrated than we are accustomed to see in any febrile disease. Albumin appears usually within the first forty-eight hours from the onset of the tonsillitis and is never very voluminous, in most cases but a trace. The microscope shows possibly a few red blood cells, some casts, hyaline, finely granular and epithelial, but always more or less abundant renal epithelium. We have, therefore, what is usually designated as desquamating nephritis. There is no oedema, no vomiting, no headache, in fact, no subjective or objective symptoms except those contained in the urine. In the overwhelming majority of cases the nephritis disappears simultaneously with the tonsillitis or soon thereafter, departs as unnoticed as it came. But sometimes it does not disappear and persists long after the tonsillitis is cured. Leyden has pointed out that it may disappear spontaneously even after a year or more has elapsed since the initial tonsillitis. Now and then, however, it does not permanently disappear, but persists indefinitely. It is true that these cases of persistence of nephritis after tonsillitis are on the whole of not very frequent occurrence, but they are not nearly as rare as would appear from the very scanty literature on the subject.

I have paid special attention to this subject for many years and I am convinced that chronic nephritis in the train of an ordinary tonsillitis is of much more frequent occurrence than is generally believed. There are no subjective symptoms; neither patient nor physician is aware of anything abnormal going on in the kidneys and still slowly, insidiously, but none the less surely, the acute desquamating nephritis gradually merges into a chronic parenchymatous nephritis, into Bright's disease. Those are the cases we see so very often where an apparently perfectly healthy person first becomes aware of his nephritis, incidental to examination for life insurance. We constantly see cases of chronic Bright's disease where all the other organs of the body are apparently quite healthy, where nothing in the history can supply an ætiological factor for the nephritis and which undoubtedly owe their origin to one or more attacks of tonsillitis which may have occurred many years ago and have long since been forgotten. If we consider that acute nephritis if properly dealt with is nearly always curable, if we remember that this particular form of desquamating nephritis is of a specially benign type, to such an extent indeed that in the majority of cases it disappears spontaneously, it necessarily follows that it is the unquestioned duty of the physician to permit no case of nephritis following tonsillitis to reach the chronic, that is to say, the incurable state. A little attention given to the urine during and after every attack of tonsillitis may prevent untold misery and suffering in after years. It is more than probable that many cases of Bright's disease can be forestalled by proper care of the kidneys in tonsillitis. It is hardly possible to be too emphatic in urging upon the profession to give the closest attention to the urine in every case of tonsillitis no matter how mild and insignificant the latter may appear to be. It is not sufficient to make a single superficial examination. The urine should be examined carefully for albumin, casts and renal epithelium daily during the attack and for some days thereafter and no patient should be dismissed as cured after an attack of tonsillitis before positive assurance has been obtained that the kidneys are entirely normal.

We know very little about the real functions of the faucial tonsils. Under normal conditions they act as a valuable defensive mechanism. It is conceivable that future research may detect some internal secretion or other chemical or physical function in the tonsil of value to the system. However that may be, so much is certain, that the organism can get along very well and without any appreciable loss of function without the tonsil. It is also certain that no matter what its normal functions may be the normal conditions are transformed into abnormal ones on very slight provocation and that the slightest abnormality in the tonsils is sufficient to change a weapon of defense into a serious menace to the entire system. Under such conditions one is almost led to feel about the tonsils as many feel about the appendix—that the body would be much safer without them.

Now we by no means advocate the methodical eradication of every tonsil, healthy or otherwise, but we do urge unhesitatingly radical measures wherever the tonsils show signs of disease. Enlarged or hypertrophied tonsils should be removed except in

¹⁶ John L. Morse: Tonsillitis a Cause of Acute Nephritis. *Archives of Pediatrics*, 1904, p. 337.
¹⁷ Leyden: Ueber das erste Stadium des Morbus Brightii. *Zeitschrift für klinische Medizin*, iii, p. 175.

those few instances where there are positive contra-indications, such as hæmophilia, certain forms of cardiac disease, etc. It is well, however, to emphasize the fact again that hypertrophied tonsils are by no means always a menace to the system. Where the bulk of the normal tissue has been replaced by fibrous material, where the crypts and lacunae have been destroyed or compressed, where the communication with the lymph channels has been to a great degree obstructed, the hypertrophied tonsil is a mere impediment rather than a source of danger. It is the nonhypertrophic tonsil with its soft permeable tissues and open communication with the lymph channels and above all with its crypts lined with sensitive and easily damaged epithelium that is the greatest menace. It is not wise to wait until infections have taken place, it is not wise to let repeated attacks of rheumatism, of endocarditis, of nephritis, etc., go by before dealing with such tonsils.

Wherever there is any tendency to attacks of follicular tonsillitis, even if only very mild, or to the fossular form (the slight inflammation of the crypts), be the attacks ever so slight, be the tonsil ever so small, there is a serious menace to the system, and the tonsil should be put out of harm's way before any serious trouble has occurred. There may be some diversity of opinion as to the best means of attaining this end, the prevention of infections and inflammations of the nonhypertrophied faucial tonsil. While it is difficult and very often dangerous to excise a tonsil that is not enlarged, it is possible without much difficulty to destroy the surface of the tonsil and the majority of the crypts, if not all of them, and replace the tissue thus destroyed by firm fibrous scar tissue. It is not my province to enter upon the various methods by which this result can be attained. This must be left to the skilled throat specialist. I will only say that for many years I have advised burning over the surface of the tonsil either with a broad Paquelin burner or with the galvanocautery. It is not wise in my opinion to pick out the crypts one by one for cauterization, as the best results are obtained when the entire surface of the tonsil down to a considerable depth is destroyed and converted into scar tissue. In this manner, by a method not very painful and in only a few sittings any tonsil, be it ever so small, can be safely and aseptically handled and in my opinion be rendered impermeable to further infection.

22 EAST SIXTY-SECOND STREET.

THE PROGNOSIS OF POSTOPERATIVE FEMORAL PHLEBITIS.*

By BENJAMIN R. SCHENCK, A. B., M. D.

DETROIT.

Phlebitis of the femoral veins, occurring after operation, is a subject which has not received deserved attention, the condition being looked upon by many as infrequent and of minor importance. On the contrary, it should always be regarded as a grave and dangerous sequela, great care should be exercised in its treatment and a guarded prognosis given.

* An abstract of this paper was read at the meeting of the Michigan State Medical Society, held at Petosky, June 28-30, 1905.

Although there are fairly numerous reports of isolated cases in the literature, there are few which contain an analysis of a series of cases and our leading textbooks on surgery and gynecology make but brief mention of the subject. Having been troubled more or less by this stubborn complication in the after treatment of operative cases in my hospital work and impressed by the fact that there were available practically no reports of a large series of cases, I compiled, some three years ago, the instances which had occurred among some 7,000 operations in the service of Dr. Howard Kelly, at the Johns Hopkins Hospital, in Baltimore. An analysis of these cases will be found in the *New York Medical Journal* for September 6, 1902. Clark¹ based his monograph on the etiology of postoperative thrombophlebitis on practically the same material.

The 48 cases which I reviewed, occurred among 7,130 patients who underwent operation. The date of onset was remarkably constant. The earliest was on the sixth and the latest on the twenty-second day, while in 25 instances it was between the twelfth and the sixteenth day, and in all but four, after the tenth day. Pain, of a dull throbbing character, sometimes in the thigh, often in the calf of the leg or in the popliteal space and tenderness along the vein were observed in all cases. Tender, enlarged glands were present in only six instances. Edema occurred in 38 per cent. of the cases. The observation of Singer,² that the pulse curve, as related to the temperature curve, is higher than that usual in other conditions was not confirmed.

These 48 cases occurred after.

Perineal operation alone.....	4
Hysteromyomectomy and myomectomy.....	19
Ovarian cysts	9
Hysterectomy for carcinoma.....	5
Suppuration of the uterus.....	3
Suspension of the uterus, with repair of the peritoneum.....	4
Hysterectomy for pelvic inflammatory disease.....	1
Miscellaneous	3

One is immediately impressed with the large number of cases (58 per cent.) subsequent to the removal of large tumors.

Since the appearance of these papers by Clark and myself, there have been two important contributions to the subject, one, a clinical report by Albanus,³ the other an experimental study by Talke.⁴

Albanus reviewed 53 cases which occurred at the Hamburg Hospital, among 1,140 laparotomies. Twenty-six followed the extirpation of tumors, 18 occurred after operations for suppurative processes and ten followed appendectomy. One very large presentation (44) was followed by embolism and ten cases terminated fatally. In more than half of the cases the operation had been a protracted one.

Talke, in studying the etiology, inoculated 44 dogs, cats and rabbits, in the vicinity of the femoral vein, with cultures of staphylococci. Thromboses occurred in 32 animals, completely obliterating the vessel in 16 and partially in 12.

¹Clark, *Laboratory of Medicine and Medical Bulletin*, July, 1902.

²Singer, *Arch. Int. Med.*, xvi, 1898, p. 218.

³Albanus, *Revue de Chirurgie*, xl, 2.

⁴Talke: *Ibid.*, xxxvi, 2.

In some instances, thrombosis was noticed as early as nine hours after the injection. Histological study of the specimens suggested that the thrombosis occurred as the result of inflammatory alterations.

A review of the literature to date convinces one that the questions of ætiology and prophylaxis are not readily answered and particularly that the prognosis is rather a matter of opinion and hearsay than of actual demonstration.

ÆTIOLOGY.—To exhaustively review all of the theories which have been brought forward to explain this unfortunate complication would consume too much space. The theories may be divided into two groups: (1) Those based on the idea that the disturbance is primarily an inflammatory one and hence of microbic origin, and (2) those in which mechanical disturbance is set forth as the dominant factor.

Just what rôle infection plays in the ætiology is difficult to determine, for these patients seldom die and there have been few post mortem examinations. The fever and leucocytosis which are almost invariably present, the occasional onset with chills and severe constitutional disturbance so frequently seen, point to an infectious origin. Moreover, Flexner has shown that many thrombi, associated with various diseases, when examined post mortem, are found to contain organisms, even when infection is not suspected before death.

Against the theory of infection may be cited the fact that a large majority of the instances have occurred in surgically clean cases and when other evidences of infection are entirely absent; that it manifests itself later than any other known infection; that it occurs when the field of operation is remote from the crural veins, as after appendectomy and operations on the kidney; that there is practically no mortality, except that associated with secondary embolism.

Among the many mechanical causes which have been cited, may be mentioned:

(1) Slowing of the circulation, first advocated by Virchow. The relative infrequency of thrombosis in the right crural veins, as compared with the left, may be thus explained, for the left common iliac vein is compressed by the right common iliac artery and is also subject to pressure from the rectum. In about one fifth only (10) of the 48 cases was the thrombosis in the right limb.

(2) Pressure from the rectum, the result of frequent enemata or of the impaction of fecal matter.

(3) Use of the Trendelenburg position with flexure of the knees and consequent pressure in the popliteal space, or pressure from the leg holder, when the lithotomy position is employed.

(4) Traumatism from the use of retractors. Clark believes that this is the most important cause. According to Clark, femoral thrombosis is due to a propagating thrombus of the deep epigastric veins, extending along the line of the vessel until it reaches the external iliac, where it gives rise to a retrogressive thrombus in the femoral vein. Some excellent arguments are set forth to substantiate this theory.

In view of the fact that practically no field of

operation is absolutely free from bacteria; from the fact that a small clot offers an excellent pabulum for microorganisms; from the fact also that post mortem examinations of the thrombi which occur in typhoid fever, pneumonia, and heart disease have almost invariably revealed bacteria; together with the fact that many of the patients, who suffer from this complication, have enfeebled circulation or a disturbance of blood pressure and that they are frequently anæmic and have albumin in the urine, (20 of my 48 cases), I believe that the rational view to adopt in regard to the ætiology is that the thrombophlebitis is caused by an infection occurring in a place of lessened resistance, which has possibly been brought about by one or another of the mechanical factors which have been mentioned. The possibility of toxins, originating in infectious material remotely situated, and circulating in the blood, should also be borne in mind.

PROGNOSIS.—Practically all histories of cases which have been recorded end with the statement that at the time of the discharge of the patient from the surgeon's care the symptoms had all disappeared. This has led to the general opinion that the prognosis of the affection is good, whereas the final result can only be determined by the histories of patients observed for some years after the initial attack.

In order to arrive at a somewhat more definite and exact conclusion regarding the resulting disability, I have attempted to obtain the histories of these 48 patients subsequent to that recorded in the hospital records. I have data concerning 29 of them, complete to October, 1904, have again gone carefully over the details of the cases and believe that the facts established warrant the publication of abstracts of the histories. I have had two instances in the course of my own work during the past 18 months but have included in this report no patient who has been operated upon less than two years.

To economize space, the age, operation, day of onset, duration, highest temperature and other details have been tabulated. Abstracts from the letters received, giving the condition since operation follow. Several of the more interesting histories are given more competely.

Number.	Age.	Albumin in the urine.	Anæmic.	Operation.	Side.	Day of onset.	Duration of symptoms.	Highest temperature.
1	40	x	x	Myomectomy	L.	14	16	103
				September 23, 1902				
2	46			Myomectomy	L.	36	10	102.4
				October 5, 1892				
3	38			Hysteromyomectomy	L.	17	30	102
				November 12, 1892				
4	39	x		Hysteromyomectomy	R.	16		
				May 11, 1895				
5	36	x		Hysteromyomectomy	L.	14	30	99
				May 11, 1896				
6	48	x		Hysteromyomectomy	L.	10	20	100
				May 12, 1896				
7	45			Hysteromyomectomy	L.	17	20	102
				January 21, 1897				
8	41	x	x	Hysteromyomectomy	L.	29	12	100.5
				April 19, 1897				
9	42	x		Hysteromyomectomy	L.	24	11	101
				January 5, 1898				
10	24			Dermoid	L.	11	10	101.8
				January 26, 1898				
11	37	x		Myomectomy	L.	16	7	100
				March 23, 1898				

12	26	Myomectomy	October 31, 1898	L.	18	103
13	30	x	Vaginal hysterectomy for carcinoma, January 25, 1899	L.	22	
14	29	x	Ovarian cyst	L.	15	100
15	46	x	Utererocystostomy	R.	22	40 102
16	28		Suspensio uteri	R.	18	10 101.5
17	46	x	Hysteromyomectomy	L.	14	101.2
18	48	x	Ovarian cyst	R.	16	100.4
19	41		Suspensio uteri	R.	11	101
20	30	x	Oophorectomy R nephrectomy	R.	15	20 102.3
21	46		Dermoid	R.	19	22 99.2
22	66		Ovarian cyst	L.	25	15 100
23	26	x	Suspensio uteri	L.	12	99
24	39	x	Perineuriaphy	R.	15	6 100
25	28		Suspensio uteri	L.	17	7 99
26	28	x	Suspensio uteri	L.	16	100
27	39	xx	Myomectomy	L.	13	10 101
28	25		Complete tear	R.	16	
29	38	x	Myomectomy	L.	11	10 101

Case II was a patient who had suffered from phlebitis after an attack of typhoid fever, at 15 years of age, the postoperative phlebitis being complicated with pleurisy; patient IV was one of thrombosis and pulmonary embolism; patients VII and XIII suffered from pleurisy and patients XV and XVI had histories of phlegmasia alba dolens, subsequent to pregnancies some years before operation. These histories, somewhat in detail, will be later given.

The remaining 32 cases were uncomplicated and the outcome of the phlebitis may be judged from the following abstracts of letters received.

CASE I.—Letter, November 14, 1904. (Twelve years after operation.) "I kept my limb bandaged for one year because it was weak. It gave no serious trouble until 1899. I then began to run a sewing machine and kept it up for 18 months. Since then there has been slight swelling and occasional pain, but not much inconvenience."

CASE III.—Letter from physician, October 9, 1904. (Twelve years after operation.) "She had very little trouble after her return from the hospital, except immediately after her coming, when there was a severe relapse for a few days. The swelling and pain subsided completely within a period of eight or ten weeks and recovery was in all respects complete."

CASE V.—Letter, November 4, 1904. (Eight years after operation.) "My limb has troubled me ever since the operation. At first it was very painful but gradually became better until it ceased to give me much trouble, except in the summer time, when I was on my feet a great deal. It is swollen a very little above the ankle."

CASE VI.—Letter from patient's mother, October 12, 1904. "Mrs. — passed to eternal rest nearly two years ago. (Eight years after operation.) She was treated successfully, came home well and continued healthy. She was not troubled by swelling of either limb after she came home."

CASE VIII.—Letter from physician, October 18, 1904. (Seven years after operation.) "The swelling, with some pain, persisted for about a year. Since then, when much on her feet, there are attacks of slight discomfort and slight swelling."

CASE IX.—Letter, November 14, 1904. (Six years after operation.) "The swelling reappeared soon after reaching home and continued for about a year. There is now, at times, slight puffiness of the ankle and a tired feeling but no pain."

CASE X.—Letter, October 11, 1904. (Six years after operation.) "The swelling has never left my limb. Especially when on my feet very much, it swells quite a great deal and I suffer from pain from the knee down. It is worse in warm weather."

CASE XI.—Letter, October 16, 1904. (Six years after operation.) "The pain and tenderness continued for two years and then gradually subsided. Now when very tired, I have an occasional attack."

CASE XII.—Letter, October 16, 1904. (Six years after operation.) "My limb still swells and at times pains excruciatingly but I walk without limping and am the picture of health. Cold weather causes my limb to ache and pain. About two years ago I left off the upper bandage which I had been wearing and about a year ago a part of the lower but I must still bandage to the calf."

CASE XIV.—Letter, October 4, 1904. (Five years after operation.) "It was necessary to bandage the limb for two months and it gave me very slight trouble for about a year, especially if I walked more than usual. There was more inconvenience from the swelling than actual pain. The limb and joints seem to be in normal condition now."

CASE XVII.—Letter, October 12, 1904. (Four years after operation.) "The swelling has never absolutely left my limb. Walking or being on my feet more than usual causes it to swell and pain more. It is affected by the weather much the same as is rheumatism. I should perhaps add that though the limb remains swollen all the time and pains me quite a little, still the suffering does not compare with the first year or year and a half. I have noticed no change for a year or more."

CASE XVIII.—The patient's husband is a physician and he has sent me a carefully prepared account of the after history. Writing on October 18, 1904, (three and three quarter years after operation), he says: "Although there was almost complete subsidence of pain, tenderness to touch and swelling continued, without any febrile disturbance though gradually diminishing, for a period of perhaps six months, when the tenderness gradually disappeared. The circumference of the limb, at this time, from 1.5 inches at the gastrocnemius, to 2.5 inches at the middle of the thigh, greater than the fellow at the same points. There was some cutaneous anæsthesia and formication in the feet and toes. The skin was blanched and pitted on pressure. There was some tenderness in the inguinal glands, which were slightly enlarged and a vague sense of discomfort in the intrapelvic region on the affected side. There was a general feebleness in the limb which caused a decided limp. In the meantime, the general health had reached the average standard. I might say that she retained the recumbent position for practically six weeks after returning home, although suffering no pain except occasional twinges on motion. During these six weeks the surface temperature of the limb was from 0.60 to 1.40° above normal. . . . There was decided tumefaction of the buttocks but without pain or tenderness. . . . At the present time there is slight swelling, more on retiring than on rising. There is no pain and no disability. She visited the St. Louis exposition with me, remaining on her feet a greater portion of the time for seven days, with general weakness as the only result of consequence. . . . I have been much interested in this matter of postoperative phlebitis, having been annoyed with it in my own work."

CASE XIX.—Letter, October 13, 1904. (Three and a half years after operation.) "I have trouble with my limb; it swells more or less every day and is painful and numb. The symptoms are more severe just previous to the menstrual period."

CASE XX.—Letter from physician, October 10, 1904.

"When last seen, about a year ago, (two years after operation), there was no remaining evidence of the phlebitis."

CASE XXI.—Letter, October 12, 1904. (Three years after operation.) "The swelling and pain were continuous for some months after returning home. These gradually disappeared but at times, even yet, there is slight swelling."

CASE XXII.—Letter, October 30, 1904. (Three years after operation.) "There was no trouble after reaching home but for fear that there might be I kept the limb bandaged for about a year."

CASE XXIII.—Letter from physician, October 14, 1904. (Three years after operation.) "Swelling and slight discomfort continued for about one month after the return home. Since then there have been no symptoms."

CASE XXIV.—Letter, November 30, 1904. (Three years after operation.) "The swelling was present for about three months and the pain for about four months. Since then I have never had any trouble with my limb."

CASE XXV.—Letter, October 11, 1904. (Three years after operation.) "I have worn an elastic stocking since coming home and this gives me complete relief from the pain and swelling which appear as soon as the stocking is discarded."

CASE XXVI.—Letter, November 28, 1904. (Three years after operation.) "Soon after returning home my limb began to swell and I still suffer from this and from some pain whenever I am on my feet more than usual."

CASE XXVII.—Letter from physician, October 17, 1904. (Three years after operation.) "Our patient was a great sufferer for about four months after returning home. However, the pain and swelling gradually disappeared and there is now no inconvenience."

CASE XXVIII.—Letter, October 14, 1904. (Two and a half years after operation.) "At times, when walking much or doing hard work, especially in damp weather, my limb swells but not so very much. Once in a while I have pains in it and a numb feeling as if asleep."

CASE XXIX.—Letter from physician, October 11, 1904. (Two and a half years after operation.) "Pain and swelling have been present more or less ever since returning home."

A most interesting point is the relationship of postoperative phlebitis and postoperative pleurisy. According to Miller,⁵ who has written a valuable paper on this subject, Mahler⁶ was the first to suggest that the attacks of pleurisy, so often seen after operation, are due to "the impaction of small emboli in the fine branches of the pulmonary artery, even to the pleura." Pinard,⁷ in the same year, called attention to thoracic pain as a premonitory symptom of phlegmasia alba dolens. Miller quotes Pinard as follows: "When we note supervening upon the convalescence from labor a stitch in the side, not marked, or a pain of sufficient severity to cause the patient to cry out, pain at the point of the shoulder, coincident with disturbance of the rhythm of respiratory movements, we think of the existence of pulmonary embolism, of small emboli which cause the above mentioned symptoms and which are followed after the lapse of from two to eight days by the appearance of phlegmasia alba dolens."

In four of my cases there was an associated pleurisy. In cases II and III the chest symptoms preceded and in cases VII and XIII followed the appearance of the phlebitis.

CASE II.—Single, age 46; at 15 years of age had typhoid fever and since has suffered from occasional attacks of pain and swelling in the left leg. Myomectomy (seven fibroids removed) was performed October 5, 1892. On the eleventh day there was a well marked right sided pleurisy with effusion and a temperature of 102.4° F. On the thirty-sixth day, after having been up for two days, pain and swelling appeared in the left leg and continued for ten days. At discharge, on fifty-first day, there was still some swelling but no pain. There was also considerable thickening of the pleura. November 7, 1904, patient's sister writes as follows: "Miss — died last January from hæmorrhages of the stomach. I cannot enter into details, but she suffered all the time with her left limb."

CASE IV which is a particularly interesting and instructive one, has been reported in detail by Miller. Briefly stated the history was as follows:

Married, age 39; condition very good except for a trace of albumin in the urine. Hysteromyomectomy with no unusual features was performed on May 11, 1895. On the eighth day pleurisy appeared on the left side accompanied by a temperature of 102° F. Signs and symptoms disappeared on the 14th day. Patient did well until the 20th day when, while sitting on a commode, she suddenly fainted. She was at once put to bed. Her pulse was weak and had a rate of 120 beats per minute. As soon as she recovered consciousness she began to complain of a heavy aching pain over the sternum. She suffered with dyspnoea, the heart's action was tumultuous and irregular, the hands and feet were cold and she complained of dark spots before the eyes and of ringing in the ears. The symptoms increased for several hours when, after an examination of the lungs, which were negative, a diagnosis of secondary hæmorrhage was made and an exploratory laparotomy performed. This showed nothing to warrant the symptoms and the diagnosis was changed to pulmonary embolism. The patient was none the worse for the rapid exploratory operation. Two days later pain and swelling appeared in the right leg, followed on the 28th day by similar symptoms on the left side. Cervical adenitis, with swelling of the right arm, appeared on the 35th day. After a long convalescence the patient was finally discharged.

Letter, December 6, 1904. (Nine years after operation.) "I cannot remember just how long I suffered with severe pains in my limbs. It was some time before I could walk and I have suffered more or less ever since. Part of the time I have been compelled to wear an elastic stocking for the support from it helped me more than any other treatment. The veins, about six inches above the left ankle, have hardened. There has been no trouble above the knees. My general health is all right."

Commenting on the foregoing case, Miller says: "The following conclusions seem to be warranted: Following operation there was a thrombus of one or more of the pelvic veins which gradually extended, finally involving both the femorals. The first attack (pleurisy) was the result of a small embolus with its resulting infarction. The second attack was occasioned by a pulmonary embolus of considerable size."

CASE VII.—Married; age 45; very constipated, otherwise in excellent condition. Hysteromyomectomy was performed without complications on January 21, 1897. On the seventeenth day pain was complained of in the left leg, followed, in 24 hours, by swelling.

⁵ Miller: *American Medicine*, Vol. 4, p. 173. August 2, 1902.

⁶ Mahler: *Arbeiten aus der königl. Frauenklinik in Dresden*, 11, 1895.

⁷ Pinard: *Le Bulletin médical*, Mai 10, 1895.

The same symptoms appeared on the right side on the twenty-first day. On the thirtieth there was sudden pain in the right upper chest, with dullness on percussion, impairment of the breath sounds and a pleuritic friction rub. The temperature ranged between 99° F. and 102° F. until the thirty-fifth day, after which it gradually fell to normal. On discharge, fifty-fifth day, all symptoms had disappeared.

Letter from physician, December 19, 1904. (Four years after operation.) "There is considerable swelling and œdema of both ankles but as there are all the symptoms of a nephritis, with marked albuminuria, it is difficult to determine what part the phlebitis plays in the causation of the swelling. There is no pain, but the patient complains of a sensation of coldness and numbness."

CASE XIII.—Married; age 30; systolic murmur at the apex and in the pulmonic region; albuminuria is marked. Vaginal hysterectomy for carcinoma was performed on January 25, 1899; the delivery of the uterus was difficult on account of its large size. On the twenty-second day the patient complained of pain in the left leg, which on the twenty-third day was much swollen; the temperature touched 100° F. The symptoms were disappearing and the patient was doing well when suddenly, on the twenty-ninth day, there was a sharp pain in the lower part of the chest on the right side, and a hacking cough. Physical examination showed dullness over the seat of the pain, a few subcrepitant rales and a pleuritic friction rub. These signs and symptoms, as well as those of the phlebitis, had entirely disappeared at the time of discharge.

Letter from physician, October 17, 1904. (Five years after operation.) "Mrs. — suffered much for three months after her return home but the pain and the swelling gradually cleared up and she is now perfectly well."

In cases XV and XVI there were histories of phlegmasia alba dolens, subsequent to pregnancy some years previously. The results in these two cases were:

CASE XV.—Letter from physician, October 13, 1904. "Mrs. — died about ten months ago (three years after operation) from a chronic pelvic condition probably developing from the old cicatrices. Her leg continued to be swollen for a long time after her return from the hospital."

CASE XVI.—Letter from physician, October 13, 1904. (Four years after operation.) "I lost sight of our patient some two years ago. At that time she still suffered from pain and swelling and was still wearing a full length elastic stocking. I have heard that she still has attacks of pain in the leg."

In summing up the after histories of these 29 patients, we find that they may be divided into three groups.

(1) Those having symptoms for a period of four months or less and subsequently no trouble, of whom there were eight.

(2) Those having symptoms for about a year and thereafter no disturbance, of whom there were two.

(3) Those who have had symptoms ever since the attack, of whom there were nineteen.

In none of these cases are the symptoms so severe as to cause any very marked disability. Practically all of the patients state that the swelling is slight and the pain present only after walking or being on the feet more than usual.

If it be permissible to deduce conclusions from these few cases, we may say concerning the prognosis of postoperative phlebitis:

(1) That all patients have symptoms for a period varying from two to four months.

(2) That, if the symptoms persist longer than six months (by which time the collateral circulation is probably as completely established as it ever will be) there is small chance that they will ever disappear.

(3) That in about 65 per cent. of all cases there is never complete freedom from attacks of pain and swelling.

302 WASHINGTON ARCADE.

A CASE OF CONJUGATE LATERAL DEVIATION TO THE LEFT.*

By J. HERBERT CLAIBORNE, M. D.,

NEW YORK.

A heavy, tall, strong, South German, thirty-seven years old, had had syphilis five years ago. He apparently recovered from all signs of it, under treatment, but a week before I saw him, that is, on October 25, 1905, he suddenly noticed something peculiar about his eyes—a skin over them, as it were. On being questioned, he stated that he did not see double, but noticed that his left hand, forearm, and leg seemed numb, and that he could not use his hand well in his work, which was that of a baker. These symptoms rapidly passed away. On being questioned further concerning the double vision, he said he saw singly except occasionally, when he was returning from work at eight o'clock in the morning; he went to his work at three o'clock in the morning.

Status on October 25, 1905. His eyes stare, but there is no lagging of the lids in downwards movements. Both eyes are turned distinctly to the left. At times, this is more marked than at others. The right eye looks further in than the left looks out. Convergent power is still present, and seems to be normal, convergence being equal in the two eyes, for a given point. He cannot be made to see double in any part of the field, even with red glass test. The pupillary reflexes and the fundi are normal. The fields are normal, and the vision in each eye is practically normal, with the correction of a slight refractive error. In walking he habitually carries his chin slightly towards the right shoulder. There is no difference in sensation to the prick of a pin, in legs, arms, and hands, but it appears that his left grip is a trifle weak. There is no Romberg's symptom, and, apparently, no difficulty in orientation, although his walk suggests a slight ataxia. The patellar reflex on the left seems a trifle increased; on the right normal.

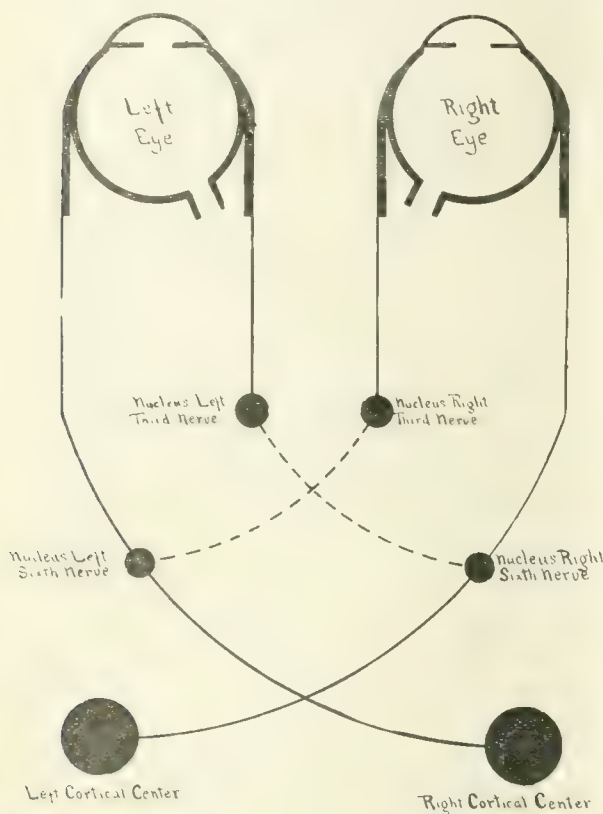
The patient was put on increasing doses of potassium iodide, but could take no more than fifty grains, three times a day.

December 13, 1905. He has continued the potassium iodide in the stated dosage to this date. The eyes appear to be straighter in general than before, but when the left eye arrives at the median line, the right eye still appears to incline slightly inward. He states that he feels much better, and says he does not have to carry his head so much to the right in walking; but still he is yet unable to carry his eyes beyond the median line to the right. He finds the fingers of his left hand somewhat stiff and clumsy in his work. There is no difference in sensation between the two hands.

It is quite obvious from the foregoing facts that this case is one of conjugate lateral paralysis, the lateral movements to the right being paralyzed. Practically all the signs and symptoms which are present in

* Read before the Section on Ophthalmology of the New York Academy of Medicine, December 18, 1905.

a classical case of conjugate lateral paralysis are to be seen here, and what is quite marked and distinct, is that the paralysis of the external rectus of the right eye is more pronounced than the paralysis of the internal rectus of the left eye. This is entirely consistent with the generally recognized view, that the centre of the right sixth nerve is the commanding one in lateral associated movements. These paralyzes necessitate the existence of cross fibres, passing from the centre for the external rectus of one eye, to the centre for the internal rectus of the other. They may distinctly be called associated fibres, for it is true that with them the associated movement is accomplished. That this is not a true paralysis of the internal rectus muscle is clear from the fact that the convergence is practically normal. This is eminently the fact in the case under discus-



sion. Therefore none of the fibres for true convergence are influenced, but only those for the associated movements to the right.

Where the cortical centre for the associated lateral motions of the eye is situated, has not been definitely discovered. Wernicke, Henschen, and Munk place it in the inferior parietal lobule, and others, Ferrier, Horsley, and Beavor, in the second frontal convolution. So that the location of the lesion in this or similar cases, must be more or less a matter of speculation. The present case is undoubtedly one of conjugate lateral paralysis, but there may be such a thing as a conjugate lateral deviation, without paralysis, and the general location of the lesion in these two contingencies, is distinctly different.

It is interesting and instructive to consider for a few moments the mechanism of spasmodic and paralytic deviation, from the standpoint of the different location of the lesion.

By reference to the scheme which I show you, and which is borrowed from Swanzy, it will readily be seen that in either case, paralytic or irritative deviations may be due to a lesion either in the cortex or in the pons. If, for example, the lesion is destructive, and lies in the left cortical centre, it is obvious that there will be a deviation of the eyes to the left, which will be seen by reference to the scheme. If, in like manner, the lesion is a destructive one, and in the right cortex, there will be a deviation of the eyes to the right. So that the eyes will look to the side of the lesion when it is destructive and cortical. If, however, the cortical lesion is an irritative one, and lies in the left cortical centre, the eyes will deviate to the right. If there should be an irritative lesion lying at the right cortical centre, the eyes will deviate toward the left. Therefore, in destructive, cortical lesions the eyes look toward the lesion. In irritative, cortical lesions, the eyes look away from the lesion. When the lesion lies in the pons, it is clear that these things are reversed. Let us suppose that there is a destructive lesion at the nucleus of the left sixth nerve. The external rectus of the left eye would thus be paralyzed, and the internal rectus of the right eye would be paralyzed. The eyes will, therefore, look to the right; in other words, away from the lesion. If, in like manner, the destructive lesion is at the nucleus of the right sixth nerve, the external rectus of the right eye and the internal rectus of the left eye will be paralyzed, and the eyes will look to the left; in other words, away from the lesion. An irritative lesion of the left sixth nucleus will cause a movement, obviously, of the eyes to the left. The eyes, in this case, will look toward the lesion. In like manner, an irritative lesion of the nucleus of the right sixth nerve will cause the eyes to look toward the right, or toward the lesion.

It now becomes of interest to settle the probable position of the lesion in the case we have before us. The deviation here is to the left, and it is a paralytic deviation. It, therefore, cannot be an irritative right cortical lesion, because there is paralysis. But it might conceivably be a destructive lesion of the left cortex, for, as we have seen, that lesion will produce the deviation to the left. It will be remembered, however, that there was a transient left hemianæsthesia and hemiplegia that would necessitate the existence of the lesion on the right side of the brain, and since the deviation, in this case, is paralytic, it is obviously not a destructive lesion of the right cortex. We are, therefore, forced to the inevitable conclusion, that the lesion is a destructive one, and that it lies at the nucleus of the right sixth nerve.

The sixth nerve or abducens originates mainly from a mass of gray substance on the floor of the fourth ventricle, near its widest part, at a point practically corresponding with the posterior border of the pons Varolii. From this point the fibres pass downward and forward through the tuber annulare to the posterior edge of the pons Varolii, where they may be seen on the base of the brain; thence, it runs along the wall of the cavernous sinus, and through the sphenoidal fissure to the eyeball. If the lesion, in this case, is not absolutely at the point of origin of the sixth nerve it, at least, is somewhere in the immediate vicinity of it, and is obviously above the decussation of the pyramids in the medulla oblongata. The hemianæsthesia and hemiplegia, fuga-

cious as they were, distinctly implied that the motor and sensory fibres, for the left side, were involved. Whether or not, the hemianæsthesia and hemiplegia were restricted to the left arm and leg, and did not involve the rest of the left side, is not obvious from the history. But, that the lesion was syphilitic, there can be but little doubt, in the face of the history given. It is a fact that there is no hemianopsia present, nor can I clearly see how it might have occurred, if the lesion is truly on the floor of the fourth ventricle. A cortical lesion, associated with hemianæsthesia and hemiplegia, might have been accompanied by hemianopsia likewise.

As to prognosis, I can see no reason why this case should not completely recover, but the improvement, so far, has been but slight. The patient is unable, however, to take more than fifty grains of potassium iodide three times a day.

The following, then, are the salient features of this case:

1. Conjugate lateral paralysis, with deviation to the left.
 2. Fugacious left hemianæsthesia and hemiplegia.
 3. The location, by exclusion of the lesion, at the nucleus of the right sixth nerve.
 4. The absence of hemianopsia.
 5. The obvious predominance of the paralysis of the external rectus, as opposed to the internal rectus, and
 6. The retention of normal convergence.
- 34 WEST THIRTY-SIXTH STREET.

REPORT OF GYNÆCOLOGICAL AND OBSTETRICAL CASES.*

By FRANK C. HAMMOND, M. D.,
PHILADELPHIA,

DEMONSTRATOR OF GYNÆCOLOGY IN THE MEDICAL DEPARTMENT OF TEMPLE COLLEGE; CHIEF OF THE OUT-PATIENT DEPARTMENT FOR DISEASES OF WOMEN, SAMARITAN HOSPITAL.

Much can be learned from a report of cases. Each of the following cases illustrates some interesting point:

CASE I.—Carcinoma of the cervix associated with multiple fibroids of the body of the uterus.—In March, 1905, I was asked by a physician to see his mother, from whom the following history was obtained. A. K., 51 years of age, Jewess, married. Has had two children; also one miscarriage. Family history negative. During the past several years she has complained of marked pelvic distress, bearing down pains, and menstrual cramps. Menstruation has been regular and normal in quantity; no intermenstrual bleeding. Gastrointestinal catarrhal disturbances. Cardioarterial system normal. Bimanual examination revealed a cystocele and rectocele, bilateral laceration of the cervix with eversion, also an induration limited to the cervical canal at the internal os; which was suggestive of a possible malignancy. The uterus was retrodisplaced, about four times its normal size and the seat of multiple small fibroids. Urinary examination negative. A complete abdominal hysterectomy was advised.

The patient was admitted to the Samaritan Hospital and operated March 18, 1905. At this time the hæmoglobin was 90 per cent., red blood corpuscles 6,000,000, and the white blood corpuscles 7,000. A panhysterectomy was done without any undue diffi-

culty, the broad ligament stumps being sutured to the vaginal wall in order to overcome the vaginal prolapsus. The left ovary was slightly enlarged and cystic, and the right ovary contained a small hæmatoma. The examination of the Fallopian tubes was negative. Upon microscopical examination of the indurated portion of the cervix above alluded to, it was found to be a cylindrical cell carcinoma. The patient made an uninterrupted recovery. When seen a few days ago she was enjoying good health, excepting the annoyance of the train of symptoms incident to the menopause, which first made their appearance four weeks subsequent to the operation. There has been no displacement of the vaginal walls.

CASE II.—Puerperal Sepsis.—H. B., colored, married, 38 years of age. Has had several children; no miscarriages. On the evening of November 6, 1898, I was called to see this patient by her husband, who stated that she had been delivered four days previously; that she had been unconscious for twenty-four hours, and had voided no urine since the baby was born. I found that the physician in attendance had been out of the city for thirty-six hours, that he had made no arrangements for anyone to see her in his absence, and his return was not expected for another eighteen hours. Upon my arrival at the bedside the following additional history was obtained. There had been no bowel movements since the delivery, and the lochia which had ceased forty-eight hours previously had been very offensive. Upon examination the patient was found to be unconscious and restless, it being impossible to arouse her; both pupils were widely dilated, but responded to light; the skin was very hot and dry; the pulse was rapid and almost imperceptible; the heart sounds were distant and scarcely audible; the abdomen was markedly distended and tympanitic, deep pressure increasing the restlessness. Upon introducing two fingers into the vagina it was impossible to reach the cervix owing to the great distention of the bladder which pressed the anterior vaginal wall very tightly against the pelvic floor and posterior vaginal wall. This pressure was so great that the fingers could not be forced up into the vault of the vagina. A soft rubber catheter was then introduced into the bladder and this organ partially emptied. It was then possible to complete the vaginal examination. The cervix was boggy; the uterus laid upon the right side, was freely movable and placenta tissue could be palpated within. At the end of an hour the bladder was completely emptied, the total quantity of urine not being measured as at each catheterization the urine was thrown out although I had asked for it to be saved. A high saline enema was given, resulting in a very free bowel movement. The family would not consent to have the uterus emptied until twelve hours had elapsed. More than half of the placenta was found adherent to the fundus, and was exceedingly offensive. About the time I had emptied the uterus and was giving an intrauterine douche the attending physician returned, saying that before he had left the city, which had been forty-eight hours previous to the time I had emptied the uterus, he had made arrangements with a fellow practitioner to help him empty the uterus upon his return; his absence from the city was one of pleasure and not of business. An unfavorable diagnosis was given from the beginning. The patient died forty-eight hours subsequent to emptying the uterus, without regaining consciousness. This is the only case I have seen where it was impossible to make a vaginal examination owing to a distended bladder. Comment upon the negligent manner in which this case was handled previous to my seeing the patient is unnecessary.

CASE III.—Hypertrophic elongation of the infravaginal portion of the cervix is comparatively rare in

* Read before the Obstetrical Society of Philadelphia, September 7, 1905.

the unmarried. The patient applied for treatment to her family physician, Dr. H. D. Stichter, for "falling of the womb," stating that her womb came part way out of the vagina. Dr. Stichter recognized the true condition, and sent her to me for operation. I first saw her October 17, 1901, when the following history was obtained. M. R., single, 19 years of age. Puberty at 13, menses regular and painless until two years ago when dysmenorrhœa began which of late has been severe. First noticed leucorrhœa four months ago, at which time soreness of the vulva first appeared. For the past year she has been working in a cracker factory where it is necessary for her to do heavy lifting, especially above her head. The cervix was found protruding through the vulvar outlet, and there was slight relaxation of the pelvic floor evidently due to the constant pressure of the hypertrophied cervix. The fundus of the uterus was at its normal level. The uterus was dilated and curetted, a Schroeder's amputation of the cervix done, and the relaxed pelvic floor was corrected by a Hegar's perineorrhaphy. The patient made an uninterrupted recovery. Since the operation there has been no dysmenorrhœa, and she has gained in weight and health.

CASE IV.—Injuries to vulva and vagina nonobstetrical.—November 23, 1904, I was called to see a domestic who had fallen down a cellar stairway and was bleeding very profusely from "the privates." The girl, a German, single, 23 years of age, stated that in descending the cellar stairs, which are unprotected upon one side, she slipped in such a manner as to fall toward the unprotected side of the stairway, falling astride the corner of a step. Upon examination the vulva and vagina were found so extensively lacerated and the bleeding so profuse, that she was sent to the Samaritan Hospital. She was immediately taken to the operating room and anesthetized. The left side of the vulva was deeply lacerated, following the junction of the labia majora with the labia minora from the clitoris nearly to the perinæum. A transverse laceration extended from the above laceration, through the left labia minora across the anterior wall of the vagina to the labia minora of the opposite side; another laceration radiated from the latter laceration to the left of the urethra extending one and a half inches up the anterior vaginal wall. The urethra was completely dissected out of its bed from the meatus to the bladder, but was uninjured. The bladder was catheterized and the urine was found clear. The lacerations were sutured with catgut, the technics being the same as that for immediate repair of lacerations of the genital tract following labor. There was perfect union without swelling, and the patient left the hospital upon the tenth day.

CASE V.—Mercurialism due to the improper use of the bichloride vaginal douche.—Mrs. B., first seen in consultation with Dr. Malcolm Douglass, May 27, 1905. This patient has had four children. She missed her menses for four months, and believing herself to be pregnant had resorted freely to bichloride of mercury douches with the hope of inducing abortion. 7.7 grain tablets were used. Two to three of these would be dissolved in two quarts of water, and several of these douches were used daily. As nearly as can be learned, the douching had been resorted to for four to five days. The patient had aborted four days before I saw her. Upon examination placental tissue was found at the fundus of the uterus and malodorous. There was an induration of the posterior lip of the cervix and internal os strongly suggestive of malignancy. The pulse was 68 and temperature 100°. The patient was in a condition of stupor, though easily aroused, and was slightly restless at times. The tongue was very much swollen and at times interfered with swallowing; there was no dribbling of saliva over the cheeks; the face

and neck were very much swollen; the mouth contained numerous eschars and emitted a very disagreeable odor, readily detected upon entering the room. During the first six days after the mercurialism developed only five ounces of urine were secreted, this being obtained by catheterization, about six and one half drachms of urine per day. It was on the sixth day of the mercurialization that I first saw her. The uterus was curetted, and at the end of twenty-four hours the temperature had dropped to normal. Potassium chlorate internally and as a mouth wash was suggested, also the infusion of digitalis, saline purgation and the free taking of water, and normal saline enteroclysis. During the seventh day six ounces of urine was secreted, and continued at five-six ounces per day. The pelvic complications were eliminated forty-eight hours subsequent to the curettage, and I then withdrew from the case, suggesting that a clinician be called in consultation as the patient was desperately ill from the mercurialism. Dr. Judson Daland was sent for, and in addition to the treatment which I had suggested he ordered caffein citrate. Within an hour after the first dose of the caffein was given the heart suddenly collapsed and failed to react. I do not think this can be attributed in any way to the drug, but to a myocarditis a part of the general toxæmia. There were no convulsions. Chloroform was used as an anæsthetic, on the presumption that less of the drug would be required than ether, hence less additional irritation to the kidneys.

CASE VI.—The eldest primipara I have had the opportunity of attending was A. S., 43 years of age, married two years. When the menses ceased she attributed it to "change of life." She was examined by a prominent gynecologist of this city who was unable to make a positive diagnosis of pregnancy until nearly the termination of the fourth month of gestation. This woman had a normal pregnancy, with the exception of the seventh month, when she developed all the symptoms of marked toxæmia accompanied with clay colored stools, at which time I was first called to see her. The toxæmia was eliminated by free mercurial and saline purgation, and appropriate diet. The pelvic measurements were all normal. Owing to the age of the patient great anxiety was felt by the members of her family regarding her labor. This, however, proved to be normal in all respects, the duration being less than nine hours. There was only a slight laceration of the mucous membrane of the pelvic floor.

CASE VII. Uterine displacement due to fecal impaction.—M. F., married, 50 years of age, whom I had under my care for renal calculus, complained one day of an irritable bladder, and was of the belief that it was due to the womb pressing against it, stating that she had a great pelvic distress, and that the womb felt as if it was higher than normal. Upon making a bimanual examination the uterus was found pushed well to the front and upward. The rectum contained a very large doughy mass. Upon making a rectal examination this mass was found to be a fecal impaction, which extended from three inches above the anus to the sigmoid flexure of the colon. Notwithstanding this large impaction, the patient had a normal, formed bowel movement each day, without the aid of laxatives or purgatives. Rectal injections were useless, and the mass was broken up with the finger and dislodged.

CASE VIII.—December 2, 1904, I delivered Mrs. W., who had previously had three children. This child had a cleft throughout the entire soft palate and a small portion of the hard palate. The first two children were normal. The mother states that the third child had a cleft soft palate and died within a few months from starvation, through inability properly to feed it. This last child was nourished with cow's milk, fed by a spoon until the fifth month when a

staphylorrhaphy was done by a surgeon of this city, the child dying upon the fourth day from pneumonia.

CASE IX.—Supernumerary digits. I have delivered a colored woman twice, each baby having a supernumerary finger growing from the second joint of each little finger. There were two joints and a nail upon each of the supernumerary digits, but no bone. The patient herself has the scars on her little fingers where supernumerary digits had been removed. She has several brothers and sisters all of whom had the same condition, and so has her mother; the latter I saw, and though 60 years of age the scars on her little fingers are still plainly visible. This heredity can be traced back to the patient's grandmother.

1419 TIOGA STREET.

THE PASSING OF THE NURSING MOTHER.*

By GEORGE DOW SCOTT, A. B., B. S., M. D.,

NEW YORK,

CORNELL MEDICAL SCHOOL OUTPATIENT DEPARTMENT FOR INFANTS AND CHILDREN.

President Roosevelt in a speech delivered some time ago made the remark that race suicide was steadily increasing in these United States. He sees the results of many conditions all combining to rob the family of its normal development. I say he sees the result, only the physician, the sociologist, the charity worker can penetrate the thin substratum of mystery and see the causes. If as Herbert Spencer says in his *History of Evolution* that the family is the unit, the nation a collection of units, then to treat the woes, sorrows and ailments of a nation we must respectively treat those same conditions in the family, and in curing the ills of the family must we not get down to a psychophysiological basis to begin with? If then the family is the keynote to a nation; if in the strong union of the family lies the strength of the nation; if all the parts of the national machinery run smoothly, must not all the intricate parts of the family do likewise? Parts must be adjusted to parts, without the perfect symmetry of union of the family no nation can long exist, its strength is weakened and dwarfed. In a perfect machine one part must bear the maximum of work of pressure, as all the parts are of necessity not exactly alike in form, size and working capacity. We see a similar analogy in the family the mother being the strongest and most important factor. The father, a creature purely of environment, giving to his offspring love and devotion purely acquired and arising from the power of imitation can never exert upon the unfolding growth and evolution of the child that depth of power which the mother, the power behind the throne, can. Any agency which weakens the mother enfeebles the family and in turn the race. Race suicide is then a misunderstanding, a misconceived idea of mother, morally, psychologically and physiologically.

The weakening or that lack of high ideals in the family impressed upon the protoplasmic susceptible mental attitudes of the growing child early leads it into the "Slough of Despond" morally, mentally and physically. Some of the

strongest bonds which hold the woman tightly to her family are her imaginative faculty, her high ideals, her religion and her strict idea of wifely duty. The feminine heart, emotional as it is at all times, under all conditions, under all skies, holds tightly to the tenets of the higher life. The more strongly her life conforms to these ideals the more rigidly will the marriage bond be held. You remember in the marriage ceremony of the Church of England one of the objects given of marriage is to have children.

The conditions working against the nursing mother may be summed up under four heads: 1. Economic; 2. psychological; 3. physiological; 4. pathological.

First: In 1900 there were only three quarters as many living children to each 1,000 potential mothers as in 1860. The birth rate over this country has persistently decreased. General F. A. Walker says that owing to the increase in immigration the growth of the native population has been severely checked, this influx constituting a decided shock to the principle of population among the native element. That principle is always acutely sensitive alike to sentimental and economic conditions. It was also proved that the decline in the native population as a whole took place in just those localities where the newcomers most freely resorted. General Walker further concludes, "if the foregoing views are true or contain any considerable degree of truth, foreign immigration into this country has from the time it first assumed large proportions amounted not to a reinforcement of our population but to a replacement of native by foreign stock." That the diminution in the birth rates indicates a progressive diminution in fertility of the American stock to produce children in either or both sexes is not warranted. It has been suggested that alcohol, tobacco and syphilis are producing a deterioration of races; but of this there is not sufficient evidence. As far as data tell us, fertility seems greatest in those countries and among those classes where alcohol is most freely used. No doubt the lessening of the birth rate is due to the mode of life of the people as from rural to urban life, the increase of luxury, the so called emancipation of women, etc. These things no doubt diminish the proportion of marriage at early ages and also favor divorce and prostitution, but it is probable that the most important factor is the deliberate and voluntary avoidance or prevention of child bearing on the part of a steadily growing number of young married couples. General Walker cites three reasons for the diminution. The first is the diffusion of information with regard to the subject of generation by means of popular school treatises on physiology and hygiene. The diffusion the writer says began some 30 or 40 years ago. Girls of 20 years of age at the present day know more about anatomy and physiology than did their grandmothers at a similar age and the married women of to-day know better how to limit the number of progeny.

As for the second reason we find the growth of the opinion that the willful abstaining of bearing children is not only not sinful or contrary

* Read before the Harvard Medical Society.

to the usual forms of religious creeds but under some circumstances extremely commendable. I meet daily in my out patient service young women who tell me without shame their means to prevent conception and the unnatural arts and artifices practiced by themselves and husbands. In this lack of moral tone, in the passing of the desire to bear children the physician and farseer forsee the passing of the desire to nurse even those borne. The laxity of a strong moral tone is engendering itself upon our people like madness. This, I think, is due to the mixture of foreign and native stock. Principles not tolerated in our country years ago are now leniently looked upon in a very tolerant manner, prostitution, abandonment of women, the easy facility of allowing the performance of abortion, even cease to create in the minds of many of our women any unusual throb or shock.

The third cause is the great increase in the use of things formerly considered luxuries which now have become almost necessities. The great temptation in securing social positions, the greater cost of family life in the lower and upper middle classes lead to the desire to have few children and to the feeding of these children by the easiest means possible, that our women may spend more time on social pleasures and exacting necessities. In the struggle of to-day for what some consider the proper way to live, marriage is held less sacred and desirable. Marriage and motherhood are held less worthily than formerly, and they are not now considered the chief objects in life. Women now "consider that marriage is bondage, they should live independently, because it's so nice to be one's own master, you know, Dr. Scott," one young lady lately told me.

The seeking after employment, the club life, the college, the artistic life, and so called broader life, the mission in life of females who could get more real enjoyment and benefit scrubbing floors all tend to disfranchise the sex and make nursing a farce. As conclusive evidence that city life diminishes marriages and birth rates and that agricultural life increases it we need only look to the agricultural States and among the colored population of the South in comparison to several States and cities elsewhere. This has been marked since 1880. It is to be noted that the smallest proportion of children is in the North-eastern States, Massachusetts coming next after the District of Columbia in the small proportion of children. The District of Columbia, all the New England States, New York, and Ohio have less than 400 children to 1,000 women, California peculiarly comes under this heading. Strange to say, the decades having the smallest decrease in the proportion of children were those immediately following a vast influx of immigrants. It is probable that these immigrants living in the United States under conditions much superior than similar conditions in Europe, and belonging mostly to the young adult class would have during the years following their arrival a very large birth rate. The number of living children to 1,000 white women in 1900 was less than three fifths what it was in 1830. The proportion of children in the United States decreased in the last

decade by 11 per cent., in country districts but 2 per cent., the decrease being confined mostly to the cities.

My second great head, the psychological, probably has as much to do with influencing the mother for and against nursing as any one great factor. It is notorious that the custom or fashion prevailing in any race or class largely determines whether men and women are good and bad. In other words our thoughts and ideas are largely of environment. The capacity to feel sexual and parental love are pure acquirements fostered by the presence of the loved one, through mental and physical pain, and through the unselfishness of nursing. The love of the female is so different from that of the male whose affection is purely an acquirement through imitation and awakened only through association. Morality of the mother is said to be only an instinct. This, however, is not so but acquired through the imitative faculty and in selected cases through reasoned thought. The nature of mental acquirements depends upon the individual's peculiar environment, upon his experiences, upon his opportunities for learning. Character itself is not dependent mainly on germinal differences but on acquirement. An individual is a child of his surroundings.

Professor Karl Pearson says, speaking of the ablest class in present society, "I am prepared to maintain that the middle classes (owing to their long period of selective mating), produce relatively to the working classes a vastly greater proportion of ability." It is not the want of ability, it is the want of stock. France is becoming more and more Celtic because the Bretons are the one element in the population which does not limit the family. Compare the early Puritans, the early Dutch and French mothers with those of the present day. Then nursing was more than a mere duty, it was the greatest honor to suckle the babe at the breast. Love and tenderness of such women was much more than the sense of duty which makes many a modern mother feed her child at stated intervals. The emotional plays, the comedies, laughter, pleasure, straining after the unattainable, all influence the modern mother, all influence her for and against wetnursing. Dr. Raspe says that fashion, vanity, selfishness, all contribute towards the cessation of nursing. Physicians, often, I am sorry to say, instead of encouraging the mother through suggestion prescribe artificial feeding because perhaps the mother's breasts are not swimming full at birth. Raspe thinks mother's milk is affected through climate, diet, individuality and constitution of the woman. Epilepsy, deceit, hysteria, idiocy, angry passion, irritability, all influence the mother's milk.

The mammae are two compound racemose glands, lined with a peculiar type of epithelium, endowed with the power of extracting from the blood the peculiar properties of fat proteids and sugar which held in suspension in water, in which are found the salts, make up the mixture called milk. This milk is properly a food, a perfect food. This is true in early life but not later, the age depending upon the individual and sur-

roundings, it containing too little iron and too much proteid and fat for later use. Milk is an emulsion in which globules of fat are suspended in a fluid called milk plasma. According to the latest investigations the fat is not considered enclosed in a thin envelope of caseinogen but that by molecular attraction, each globule is covered with a closely adherent layer of milk plasma. The specific gravity of cow's and human milk varies from 1028-1034. The composition of milk in general is as follows: Water; casenogen; lactalbumin; lactoglobulin; lactose; fat; extractive, but this again of creatin, creatinin, hypoxanthin, cholesterolin; urea; salts; gases, such as oxygen, nitrogen, carbonhydrid.

The physiological comparison of cow's with human milk is as follows: Cow's milk contains more proteid, fat, salts, but less sugar. The fats of each are about equal and do not differ markedly. The casein of human milk is smaller in amount and curdles in looser flocks, it dissolves more easily and completely in the gastric juice. Cow's milk is very prone to ferment, lactic acid being formed from lactose. This is extremely irritating to the delicate mucous membrane of the young infant.

Those of us who have seen the young, healthy peasant woman abroad nursing her child at full breasts, the infant being rosy and healthy, can easily see the difference in some of the infants bottle fed of the upper middle and upper classes of this country. A healthy, nursing mother is as a healthy cow, rugged health meaning a perfect digestion, perfect skin, a clear eye, brisk in her walk, having good, firm, milk giving breasts. The flow of milk often in good, normal breasts is regulated by the central nervous system either through secretory or vasomotor fibres. It is, however, essentially an automatic organ. A sudden grief, a shock will completely retard the flow, whereas a pleasure, some form of happiness will cause a rapid secretion of good healthy milk. I recall a case where a husband was suddenly killed, the milk in the wife's breasts was completely stopped.

It seems unfortunate that in this century those mothers who can, will not nurse their children, and those who cannot, will try to. Only the other day I was called in consultation in a case of mild gastroenteritis where the mother had been wetnursing the eight months' old infant two times in the day. She had had stuffed peppers, radishes, veal, and pie among the articles of diet at dinner and wondered why the child became ill. On examination I found her breasts firm, hard and full of milk rich in fat. My desire to place the baby back on the breasts wholly after the mother had undergone a diet and hygienic adjuvants was met with the answer that she could not give up her time from her social duties, her husband also wanted her more to himself. On the other hand, all of us have met with the woman, hungry, starving, it may be, who will not take the babe from the breast fearing it may die.

The results of emotion, pain, shock, etc., cause some as yet not understood chemical changes within the body, affecting no doubt the blood

and this in turn the milk. Neurasthenics have unusually poor breastmilk, the users of alcohol in excess also. When we realize how important hygienic discipline in the making of good breastmilk is we have gone a long way towards healthy children. To the nursing mother physicians give indefinite directions often as to meat eating, massage, bathing, the use of alcohol, milk drinking, cacao drinking, and the necessity for regular periods of eating. The diet of the nursing mother in the lower classes is sometimes awful. The following was a diet I got from a mother to-day with a three months' old child. For breakfast three cups of coffee, at about 10 o'clock three fried eggs, more coffee, at 12:30 cold pork and fried potatoes, in the afternoon some fried cakes, and in the evening tea and more cold pork. The infant, by the way, was suffering from gastroenteritis. Really I fail to see in the diet of this before mentioned young ignorant mother evidence of more ignorance than the woman of the wealthier class subsisting upon stuffed peppers, lobsters à la Newburg, wines, champagnes, and the like.

There is no doubt that alcohol in moderation is a food, it yields a large supply of heat energy, it causes an increased proteid absorption and stimulates gastric secretion. Newmann and Rosemann maintain that alcohol may take the place of fats and carbohydrates as a protector of proteid metabolism. Alcohol increases distinctly the absorption processes in the stomach. In excess, however, it acts as a strong poison and many an infant has suffered the effects of a deranged metabolism from the indulgences of the mother. Edmunds, of London, even goes so far as to say "a large number of nursing women friends of mine in London have acquired the habit of drinking whiskey, stout and beer at meals and their sucklings are never sober from the time of birth until weaned." Excessive coitus in two cases of mine exerted a like detrimental change to the milk. There can be no doubt, however, that the excessive use of alcohol in the mother can manifest itself in the child in the form of epilepsy, hysteria, hysteroepilepsy, irritability, night terrors, and in the acute and subacute psychoses often transitions of them, also in angry, uncontrollable passion, and in the perversion of morals and principles.

The inability of the young, strong, healthy mother to nurse her own child lies in the ignorance or wilful disregard of the proper diet and personal hygiene. The excessive use of meat, and the lack of vegetables, cause fearful digestive disorders from putrefaction. As long as the products of proteid digestion are limited the products will be absorbed. Conditions preventing or retarding this absorption favor the occurrence of proteid putrefaction. It has been proved that the presence of carbohydrate material has a restraining influence upon this proteid putrefaction. The simplest explanation is that acids as lactic and acetic acids and the like inhibit the action of the proteid bacteria. The list of end products of proteid putrefaction is a long one. Besides peptones, proteoses, ammonia, and the various amidoacids there may be produced such sub-

stances as nidol, skatol, phenol, phenylpropionic and phenyllactic acids, fatty acids, carbondioxid, hydrogen, marsh gas, hydrogen sulphide, etc. Many of these products are given off in the fæces, the others are absorbed in part and excreted subsequently in the urine, this is particularly true of phenol, indol, and skatol. These toxins produced in the nursing woman probably exert no lasting effects upon the suckling unless long continued.

There is, however, a condition in many a nursing mother which works untold damage upon the present and future welfare of the infant. I refer to the as yet not understood condition of autointoxication. Rachford says "autointoxication is the most important and least understood of all causes of neurotic diseases in infancy and childhood." These poisons are not of microbic origin but substances formed by various organs in the body to serve some normal purpose and pathological when in excess they are accumulated in the blood and tissues, or they are substances formed either normally or abnormally in tissue changes incident to functional activity of muscles and other organs. Von Noorden says, one form of autointoxication in particular, namely, intoxication by acid products of metabolism or in other words, acid intoxication is well understood chemically and experimentally. In the process of normal metabolism a number of acid products of the disassimilation of proteids, fats and carbohydrates are formed as intermediary bodies that either undergo further degradation or that cannot be oxidized further and are consequently excreted. On the other hand, in the perversion of this metabolism the most important features are the reduction in the alkalinity of the blood, the increased excretion of ammonia and the appearance of acids that are not present normally or, at best, in small quantities.

These acids are sarcolactic, carbaminic, aliphatic, oxalic, and uric acids, aromatic oxyacids and most particularly beta oxybuturic and diacetic acids and acetone. Acetonuria is produced also by loss of appetite, vomiting, diarrhoea, and decreased ingestion of food. We can easily see the condition applies to rich and poor alike. When we realize that the ingestion of the proper amount of carbohydrates cures this condition we feel like the proverbial ass. When we realize that this toxine formation in the mother is transmitted to the offspring through the mother's milk, when we appreciate that the future of the infant lies in the proper régime of the mother, then we certainly have awakened. Rheumatism leading to cardiac disease, neuralgia, gastric neuroses and so called functional neuroses all are the products of these accursed poisons.

The living cell is a protoplasmic body capable under proper nutrition and stimulation of growth or mitosis. The conductivity in the cell of an infant is not so marked as in that of an adult. The brain of an infant at birth is morphologically and functionally the most immature of all great organs of the body. From birth to the seventh years it develops enormously in weight, in structure, and in function, after that it slowly increases in weight up to the age of 18 years, but

increase of function does not keep up with increase of weight. Innumerable conditions of heredity, environment and proper nutrition have their influence upon the nervous system of the child in developing or retarding both structure and function. One of the physiological characteristics of the immature nervous system of the infant is feeble inhibition. It is a great predisposing factor in the neuroses of infancy but the inhibitory function of the nerves is the last to be developed, says Rachford.

The cell first acquires the function of generating energy, then of discharging energy. The function of inhibition is likely to be retarded in development by unfavorable conditions of heredity, environment and improper hygienic régime of the mother, therefore very feeble inhibition produces neuroses in infancy and to overflow of spinal reflexes, or, in other words, to convulsive disorders of all muscles operated through spinal motor nerves. One of the functions of this inhibiting mechanism is to prevent an overflow of discharging stimulus and spreading to other portions. This overflow is not peculiar to spinal cells but occurs also in cortical cells, producing excessive mental energy or the acute psychoses. The nervous system of the healthfully nursed child is not so frequently excited as that of the artificially fed infant. Strange to say, the reflex neuroses of early infancy I have rarely seen, probably from the fact that the motor areas do not respond to stimuli as readily as those of older infants and children.

In passing it might be best to enumerate the comparatively few possible pathological contraindications to breast feeding. These conditions, however, are so few and far between that I cannot believe they cut much figure: 1. Absence of glands; 2. fissures; 3. erysipelas; 4. mastitis—such as fistula, atrophy of breast, puerperal, and nonpuerperal, acute, subacute, chronic; 5. galactoceles; 6. lipoma; 7. chondroma; 8. osteoma; 9. fibromata; 10. sarcoma in all forms; 12. carcinomata; 13. syphilis of mammæ.

If the nucleus or a hypothetical substance within it termed the germ plasm is the bearer of heredity as Reid suggests why can it not be the bearer also of hereditary disease toxins or germs. Proper nutrition of the cell of the infant is so important when we realize that chorea, epilepsy, etc., can be transplanted or originated there. Krafft-Ebing goes so far as to say that we often times see easy transitions from these conditions to insanity proper.

Good breast milk is Nature's perfect food. Jerome Walker says, under the report of the Sheltering Arms Nursery, that 90 per cent. of breast fed children live, whereas a large mortality is seen under the artificially fed infants. Among the hardest things to convince the mother of a bottle fed child is that because the child is fat it is not necessarily healthy. Those of us who see scores of infants during the week with fat protruding cheeks, prominent abdomen, large thighs and arms, and small undeveloped muscles cannot fail to see this fact. Admitting that a proper modification of milk is better than poor breast milk and admitting that rhachitis and

malnutrition, the curses of improper food, can be caused alike from improper breast milk as well as poor artificial food, yet the burden of proof lies towards breast feeding and the proportion of malnutrition and rhachitis is much less in infants thus fed. The best artificial modification is none too good.

Daily I see growing infants and children exhibiting signs of early faulty nutrition, in other words malnutrition. In early life this is seen in the too low body weight, the pallor not at times amounting to anæmic, however. The different kinds and degrees of stomatitis, the sunken fontanelle, the skin dry and often areas, large or small, of papular or vesicular eczema covers the body. The skin often hangs in folds, the heart is weak, the pulse wavy. The teeth appear late and then are prone to caries. The gum and nasal mucous membrane are covered with a red blue flush, the pharynx and fauces often with a similar blush. Craniotabes often is observed. The child is irritable, cries frequently with a small sickly, "don't care if I die" whine, waking up in the night with no apparent reason to give vent to piercing screams, resulting from some digestive disorder. Their hands and feet are cold, the head at times in a young infant clammy and moist, at times distinct beads of sweat stand out upon the forehead, the face is senile in appearance. The temperature at times sub-normal. Diseases sweep through these enfeebled ranks like wildfire, such malnurtured children having practically little or no resistance to them.

"It is up" to the clergy, sociologist and physician to better the conditions confronting the family to-day. The knowledge of proper diet at different stages of the nursing year, hygiene and hydrotherapy must be understood and taught and last but not least hypnotism in the form of suggestion must be brought into play. The simple life is fearfully needed among our native women, that practiced among the ancient Spartans, the Athenians, and Romans, vegetables being their principal diet. There is no doubt that the fusion of all the European stocks has made us a great nation as Herbert Spencer declared a similar condition would, yet has not this crossing degraded our women? I plead for the old fashioned nursing mother.

118 WEST EIGHTIETH STREET.

MYELITIS COMPLICATING PREGNANCY.*

By J. THOMPSON SCHELL, M. D.,

PHILADELPHIA,

PAEDIATRICIAN TO SAMARITAN HOSPITAL.

The case which I report this evening is one of acute myelitis complicating pregnancy. The literature on this subject seems to be quite barren and this complication very rare, and for that reason I felt as if I would be justified in taking up your time with a brief report.

Whether the acute myelitis was simply a purely accidental complication or whether the pregnant state had any ætiological influence on its production is an open question in my mind,

and I hope to hear an expression of opinion on that point.

Edgar states that both hemiplegia and paraplegia complicating pregnancy are liable to disappear during the puerperium and that the cause is sometimes pressure of the child's head on the pelvic nerves.

Winckel makes but slight mention of the occurrence of myelitis during pregnancy except that it is rare and usually disappears shortly after delivery.

Tarnier states that pregnant women are not exempt from the causes that produce myelitis and are even more liable than nonpregnant women, but that the prognosis is more favorable.

Churchill reports 34 cases of paralysis during pregnancy or just after labor, gathered from his own experience and from the reports of other men. Of the 34 cases, four only were paraplegic and only two of these involved both legs. He gives as the causes of paraplegia anæmia, uræmia, rheumatism and hysteria.

M. Jaccourd states that paraplegia in pregnancy is due to exhaustion of the nervous system caused by a long continued excitement of the spinal cord transmitted by the uterine nerves which exhaust the excitability of that particular segment of the cord and thus closes the avenues by which motor impulses are transmitted.

Churchill reports a case of a primipara developing paraplegia after labor in which there was a free hæmorrhage. On attempting to get her up on the 11th day he noted complete paraplegia. Motion gradually returned until at length the patient could walk with the assistance of a cane. At this time she became suddenly paraplegic again. This second attack being found afterwards to have coincided with the time of her becoming again pregnant. She remained in this condition until several months after delivery but finally recovered perfectly her power of motion. He has no explanation for this remarkable case but refers to the theory of Jaccourd of reflex exhaustion of the spinal segment as a possible explanation.

The history of my case is briefly as follows:

Mrs. L., age 26, white, had one child one year and five months prior to the last pregnancy. The first pregnancy was normal in every way. Urine was repeatedly examined and showed nothing abnormal. The labor was tedious but no instrumental interference was necessary. A slight partial laceration of the perinæum requiring a few stitches was the only complication and the convalescence was normal. She was examined two months after delivery and the pelvic organs were normal, except for a tender right ovary and a very slight laceration of the cervix.

The last pregnancy began after the January period, which ended on the 26th. She had all the ordinary symptoms of pregnancy, including a moderate amount of nausea. The urine was examined about every three weeks, and at no time was anything pathological discovered. She felt life on June 5th, and from that time until August 30th she was seen at infrequent intervals and seemed in good health.

On August 30th she went on a shopping trip lasting nearly the entire day, and returned to her home in a tired and weary condition after exposure to the weather, which was very inclement on that day. Patient felt as she expressed it that she was "catching a

* Read before the Philadelphia Obstetrical Society.

cold" at 9 p. m. She had a slight chill, and began to suffer from general muscular soreness, especially in the lumbar region and down the thigh. I was called to see her at this time. Temperature 102°, pulse 90. I ordered her to bed and prescribed calomel 0.2 grain and phenyl salicate 5 grains, Dover's powder 3 grains every two hours, followed by magnesium sulphate. The next day she seemed much improved. The general soreness had disappeared, the temperature was 99.2°, pulse 78; but she now complained of rather severe pains in the thighs and legs.

The following day when attempting to get out of bed she found she had lost control of her left leg, and in about twelve hours the right leg was in the same condition. An examination at this time showed complete loss of knee jerk in both legs. Sensation to touch was normal, no anæsthesia. Incontinence of urine was also present, but only lasted for forty-eight hours. Since that time she has had perfect control of the bladder.

The bowels were at no time affected. The temperature became normal on the sixth day, the tenderness in the legs and back gradually disappeared, but the paraplegia has remained about the same. She was delivered October 20th, and had a rapid labor, lasting only two hours and thirty-five minutes. No complication appeared, and she made an uninterrupted obstetrical recovery.

Since the completion of labor her urine has been examined several times, but nothing abnormal was found. Under treatment with strychnine, potassium iodide, electricity, and massage she has regained slight motion in the right leg and thigh, but is still unable to stand.

Dr. Luther C. Peter, who kindly examined the patient with me, agreed as to the diagnosis and myelitis, probably in the lumbar swelling and expressed the opinion that the exposure and not the toxæmia of pregnancy was the causal factor.

313 SOUTH THIRTEENTH STREET.

MASTOIDITIS AND SIGMOID SINUS THROMBOSIS IN AN INFANT.*

By SEYMOUR OPPENHEIMER, M. D.,

NEW YORK,

OTOLOGIST TO GOUVERNEUR HOSPITAL, LARYNGOLOGIST
AND OTOLOGIST TO MT. SINAI HOSPITAL DISPENSARY.

While the recognition of sigmoid sinus thrombosis presents comparatively few difficulties in the adult when the condition is uncomplicated by other intracranial conditions, yet in the very young child the reverse is usually the case, and in small children when such a condition does infrequently complicate a mastoiditis it is extremely difficult to recognize the vascular involvement during at least its early stages.

From the very nature of the pathological changes taking place in the mastoid process and its adnexa, it is evident that cases of chronic suppurative otitis should lead to this condition more frequently than acute conditions; and when one considers the highly vascular relations existing between the various parts of the temporal bone and the extreme delicacy of the osseous tissue itself, especially along the lines of the sutures, it is very evident that the infection of other parts from the original suppurating focus in the middle ear may produce serious destructive changes and yet the symptoms indicative of such conditions remain more or less obscure.

The following case presents several points of

great interest, and especially does it seem of importance on account of the destruction present in the interior of the temporal bone with involvement of the sigmoid sinus, and yet at times during the course of the disease the symptoms were so slight as to scarcely attract attention.

A. L., twelve months, had a severe coryza when eight months old, accompanied with a marked degree of nasal stenosis to such an extent that it was necessary before each nursing to cleanse the nasal chambers with an alkaline solution and reduce the congestion with adrenalin. At the end of one week the coryza had almost disappeared and he was in good condition, when the temperature rose to 102° F. after a restless night. A thorough examination revealed nothing abnormal except the left ear, which showed marked congestion of the membrana tympani and bulging of its lower segment. A free incision was then made in the membrana tympani and an excessive amount of pus was released under pressure. Within a few hours the temperature had returned to normal and the child showed no evidence of pain or discomfort in any way. On account of the profuse discharge, the canal was carefully cleansed twice daily and gauze drains were employed, so that at the end of ten days the discharge had entirely ceased, the incision in the tympanic membrane had healed, and in all respects the child appeared to be perfectly normal.

Nothing was then seen of the patient for nearly four months, when the following history was obtained. He had remained perfectly well until five weeks previous, when following a slight coryza he became very restless, seemed to have considerable pain in the previously affected ear, and after a few hours a slight purulent discharge was noticed running from the auditory canal. This continued until one week ago when the discharge became very scant. During this time he had lost considerable in weight, was fretful, slept irregularly, and would often refuse to nurse.

Examination showed a scant, dark colored, offensive discharge in the canal, there was a large perforation of the inferior segment of the tympanic membrane, and pressure over the tissues behind the auricle produced evidences of considerable pain. The temperature at this time was normal, but the condition of the ear and the general asthenic state of the child very clearly indicated a serious mastoid lesion, and immediate operation was advised. Consent for operation was not, however, obtained at this time, owing to the difference of opinion among the medical advisers.

On the following day the temperature in the morning was 104.8° F., pulse 130, respirations 32; while five hours later the temperature was 99°, pulse 100 but weak, while the respirations were 28. At the same time the child looked very much worse, while the auricle was beginning to project and the mastoid region to become swollen.

On account of the rapid temperature change and the apparent septic condition of the child, it was considered that the infection had involved the lateral sinus and the parents were again informed that immediate operation was imperative. This was performed on the same day under ether anæsthesia, with the child in an exceedingly serious condition, the temperature having risen just previous to operation to 104.3° F. After making the skin incision and opening the cortex, it was found that the latter was exceedingly thin over the location of the antrum and was quite dark in color, while the slightest pressure with a sharp spoon was sufficient to break it down, as in a child of this age, the antrum is almost immediately under the surface of the bone. The antrum was found full of granulation tissue and disorganized bone debris, while the mastoid in great part was considerably necrosed and softened. This

* Presented at a meeting of the Otological Section of the New York Academy of Medicine, January 11, 1906.

tissue, with a small amount of greenish offensive pus, was then removed and the entire mastoid cortex was cut away, and as the aditus contained a large amount of granulation tissue the upper posterior canal wall was in part removed.

After removing all of the cortex, the carious osseous tissue over the sigmoid sinus was carefully taken away, thus exposing the sinus at the bottom of the bony cavity. On account of the extensive necrosis here, a considerable area of the sinus was readily exposed, but higher up and also lower down to the jugular bulb the bone was removed with rongeur forceps, so that as large a space was obtained as possible in the necessarily restricted field. On palpating the sinus no pulsation was felt, so it was opened and a septic clot was found beginning to undergo disintegration. With the curette the clot was removed in small pieces and considerable difficulty was found in obtaining the blood flow from above, but this was finally accomplished and while the bleeding was controlled by pressure here, little difficulty was experienced in removing the portion of the clot lower down and a free passage was readily secured. As the child was in a very bad condition, hypodermoclysis was employed and after rapidly removing all the necrosed bone that could be found the wound was dressed in the usual manner.

For the first two days following operation the heart was weak and irregular, the pulse was between 130 and 160, while the temperature varied from 97.5° to 102° F. Then the condition greatly improved until the fifth day, when the temperature suddenly rose to 104.5°. The mastoid was reopened and a few drops of pus were found in close contact with the sinus. This was removed, a fresh dressing applied, and the case rapidly progressed until within a few weeks the child had regained his lost weight, the mastoid wound healing in seven weeks.

Of the various symptoms more or less indicative of involvement of the sigmoid sinus, rigors followed by a rapid rise in the temperature to 104° or 105° F. or more, is one of the most characteristic, but in the very young child it is practically impossible to obtain any evidence of a definite chill, and considerable dependence must be placed when the mastoid is involved upon the frequent vacillations of the temperature over several degrees. The pulse rate is often fast, but later it becomes small and weak, and usually offers but little information. When the suppurative changes are extensive and, as in this instance, have lasted for a considerable time, the skin may show the evidences of the general pyæmic condition. It is dry, may be more or less sallow, or even of a decided yellow hue, and the accompanying disturbances of the alimentary canal, such as a heavily coated tongue, constipation alternating with diarrhoea, are also present. Vomiting, optic neuritis, and some retraction of the cervical muscles are of some value in aiding the diagnosis in adults, in conjunction with other symptoms; but in the infant the two former symptoms cannot be considered, while the latter is more indicative of some meningeal involvement than otherwise.

Should the thrombus involve adjacent venous channels in its extension from the sigmoid sinus, it is possible to find more or less characteristic local symptoms which will present features of considerable value in overcoming the diagnostic difficulty, such as œdema over the region behind the auricle and possibly extending to the temporal region, when the venous channels of these parts are obstructed; while, should the thrombus extend down through

the channel of the internal jugular vein, there will develop an inflammatory band like prominence along its course, and the cervical region on the same side will become quite painful to pressure.

All of these symptoms, however, develop so late, or individually are of so little importance in the very young child that the most reliable diagnostic symptom of the sinus involvement during the course of the suppurative otitis media is undoubtedly the rapid exaggerated oscillations in the temperature range, so that it is highly important in such cases that the temperature be taken at least every two or three hours, both by day and night, in order that such changes are not allowed to continue without being recognized.

45 EAST SIXTIETH STREET.

THE CHEMICAL COMPOSITION OF MEDICINAL PLANTS.

By EDWARD C. HILL, M. D.,

DENVER, COLO.

Vegetable matter in general shows a marked complexity yet simplicity of composition. This paradox depends on the close chemical relationships of the various carbon classes, and on the fact that vegetable forms are built up largely from a few simple compounds (water, carbon dioxid, nitrates, phosphates) by a process of polymerization (formaldehyde, a primary product) with elimination of water and oxygen.

The rootlet cells of plants distended to normal turgor with their slightly acid (carbonic) and saccharine protoplasmic contents, cause endosmosis, through the elastic limiting membrane, of the mineral solution in the soil. This nutrient fluid, drawn up to the leaves by osmosis mainly, is elaborated there, through the agency of chlorophyll and sunlight, into a sort of mucilage, which, by the addition or subtraction of water, becomes the sugar of the sap and fruit and the starch or cellulose of the tuber and woody portions. The curve of anabolism in plants is most rapid from exposure to the yellow rays of the spectrum, but actinic rays are said to be specially favorable to the multiplication of chlorophyll granules. The fluorescent nature of chlorophyll is an aid in the utilization of sunlight. Plants, like animals, have selective nutritive power, and take up proportionally more bases from the soil solution, unless this contains excess of nitrates. The ferments in plants are essential to their growth, to the germination of seeds and the ripening of fruits.

Plant principles used medicinally consist chiefly of catabolic products, which serve the purpose of self protection against bacteria, fungi, insects, worms and larger animals. Thus bitter tannin and alkaloids, essential oils and the prussic acid of stone fruits may be of service in a manner analogous to the cerumen of the external ear. Solanine develops much more in growing potatoes exposed to direct sunlight. Volatile oils, resins and oleoresins may attract or repel insect visitors. White pine contains so much resin that it is said never to rot. Resins are probably also of use to shrubs and trees

in keeping up internal heat during the winter. Gums are usually formed by transformation of all or part of the cell walls. They have been produced by growing microorganisms on artificial media, and the yield of gums can be vastly increased by inoculating certain trees with cultures of proper bacteria.

The roots of medicinal plants contain various alkaloids, glucosides, fixed and volatile oils, resins and starch. The smaller leafy and flowering or fruiting stems of many plants are used in medicine. Tubers are in the main a storehouse of starchy reserve material for the use of the plant in the second year of biennials. Rhizomes likewise, as a rule, contain considerable starch. The outer color of barks depends on lichens. All barks contain much tannin (*quercus alba*, 7 per cent.; *rubus*, 20 per cent.), which varies slightly in constitution in different plants. Heart woods often have tannin, resins and coloring matter. The green color of leaves and floral foliage is due to chlorophyll and the closely allied xanthophyll. The coloring matters of flowers are mostly unknown (probably phenol compounds) and are readily decomposed. These colors serve, like the scent, to attract insects to get the nectar (saccharose) and pollen, and so insure crossfertilization. White or pink flowers are turned blue by treating the plant with iron. Plants bloom (Loew) because of stimulation by the sugar in the sap. This saccharine solution is more concentrated when the moisture supplied to the plant is deficient.

Malates, tartrates, citrates, and their free acids (more in unripe), with sugar (replaces starch) and pectine are the chief ingredients of edible fruits. All aromatic umbelliferæ yield volatile oils. Seeds are relatively rich in fats, proteins and alkaloids. The aleurone grains are made up of a globoid body of the phosphates of calcium and magnesium and crystalloid proteids, in a ground substance which is soluble in water.

Climate, season and soil have much to do with the composition (quantitative particularly) of plants. The proportion of any element in a plant can be greatly increased by furnishing its rootlets with a suitable mineral substance. The iron content of spinach has been increased sevenfold by treating the soil around the roots with ferric hydrate. Many volatile oils vary in their constituents according to climate and soil, and even with the part of the plant. The tannin in geranium is very abundant in April. The hydrocyanic acid of *prunus virginiana* amounts to $\frac{1}{7}$ of 1 per cent. in October, and is developed on moistening. The composition of resins from a plant may vary from day to day. American aconite (up to 0.85 per cent. alkaloidal value) is more active than the European.

Roots should be gathered at full maturity, just before the flowering period—biennial plants in the autumn of the first year, perennial in the fall of the second or third year. Aconite tubers are usually best gathered in winter or early spring. Barks are to be peeled off in the spring when the sap begins to flow, or in winter. Only the inner layer of the coarser barks is used medicinally. Leaves and herbs should be collected when the plants are in full flower, and should be dried carefully in the shade so as to retain their bright green color. *Digitalis* leaves should be plucked in the autumn of the sec-

ond year; they must be used within a few months. Flowers are collected when they first open or just after, and are dried in the shade. Seeds are to be gathered just while ripening, before the seed pods are open, and are winnowed to remove fragments of stems, leaves and shriveled specimens.

Crude drugs and their products used in medicine are generally mixtures of considerable complexity. Thus *asafetida* contains a dozen chemical constituents. Oil of peppermint consists of at least 15 terpenes. Even the so called active principles are not always chemical entities. Commercial aconitine is a mixture, in variable proportions, of true aconitine, pseudoaconitine, aconine, pseudoaconine, and picroaconitine. The crystalline aconitine is about three times as strong as the amorphous, and this is five or six times the strength of the eclectic resinoid aconitine.

The resinoid mixture termed podophyllin (extracted by water from an alcoholic extract of *podophyllum*) contains podophyllinic acid, podophyllo-toxin, picropodophyllin, fatty oil, extractives and a yellow pigment. Daturine is a mixture of atropine and hyoscyamine. Pelletierine, or punicine, comprises all the alkaloidal constituents of pomegranate bark. The gelsemin of commerce is a mixture of gelsemin and the more active gelseminine. Veratrine is a mixture of quite a number of alkaloids; coniine, of four; "aspidospermine," of six. The strophanthin of commerce (mostly pseudostrophanthin) is often a very toxic and variable mixture. "Staphisagrin" is a mingling of amorphous bases. *Digitalis* is more reliable than its glucosides, and sparteine is very uncertain in action, partly perhaps because of its volatility.

Because of cheaper production, synthetic preparations are replacing more and more the natural plant derivatives. It suffices to mention in this connection the manufacture of salicylic acid and oil of wintergreen from coal tar; of camphor from turpentine; of valeric acid by oxidation of amyl alcohol; and of codeine by methylation of morphine. Much alcohol is now made synthetically.

A growing plant is more than three fourths water, which keeps up a marked tension, and by the partial loss of which the plant wilts. The ash of plants seldom exceeds 3 per cent. (rhubarb sometimes 40 per cent.; 15 per cent. in *chondrus*), being most abundant in the stem and leaves. Mineral substances in general facilitate chemical reactions. Calcium serves the same purpose in the cell walls of plants as in bones, potassium aids in condensing organic molecules. Sodium is not needed by plants. Silica gives a protective sheath or cutting edge to certain leaves. Buchu ash is rich in manganese. Potassium nitrate is a common constituent of plants (*hyoscyamus*, tobacco, borage), but the most abundant plant salt is calcium oxalate, which appears in single or multiple (rhapheides) crystals in many species (most in rhubarb root). Calcium carbonate is found occasionally as "cystoliths," resembling bunches of grapes. Vegetable acids are widely distributed throughout nature, being partly free and partly combined with metals and alkaloids. Oxalic acid is most abundant, giving the sour taste to many plants. Combined with the alkaloids of cinchona bark are kinic, kinovic, and cinchotannic (tannin with red coloring matter) acids. The disagreeable

odor of viburnums is due to valeric acid. The bitter anthemic acid is found in matricaria; cubebic acid, in cubebs; igasuric acid, in nux vomica; maizenic, in corn silk; acetic, in pitch; copaivic, in copaiba. Filicic acid changes with age into its inert anhydrid filicin. Sugar or molasses is usually added to the pulp of tamarinds, to cover the sharp taste (9 per cent. citric acid).

The alkaloids of plants, in combination with acids, are most abundant in the seeds and roots, and occur almost exclusively in dicotyledons (muscarine in fungi). The pyridine nucleus, extended in cross chains of carbon, appears in cocaine and the solanaceous alkaloids; the quinoline nucleus (pyridine with benzene ring), in the strychnos alkaloids. Some opium alkaloids show a three ring structure of phenanthrene united to pyridine with an O substituted for one C.

Belladonna shows more alkaloids in the leaves than in the roots (young ones contain hyoscyamine only) at all times; more in the stem (bark) than leaf when the berries are ripe. Veratrine is obtained mostly from cevadilla seeds, and strychnine from ignatia. Cinchona bark contains 43 alkaloids (35 preformed), many of which are isomeric with quinine, quinamine or cichonine. The yellow alkaloid berberine (a simple bitter) is present in barberry, columbo, golden seal, mandrake, pareira brava, yellow parilla, prickly ash bark and other plants. There is no opium in poppy petals, and little, if any, strychnine in the bark of nux vomica. The volatile oily alkaloid pelletierine may disappear from grana-tum bark if kept long. Among amorphous plant bases are cannabine, colchicine, delphinine, lobeline, oleandrine, pseudocurarine, and the alkaloids of hops.

The neutral principles (glucosidal and nitrogenous) of plants include some of the most important remedies. The glucosides may be of service to the plant as potential sugars; saponins are strong emulsifying agents and are important constituents of digitalis, senega, sarsaparilla, squill, guaiac, quillaja. The tannins are extremely abundant, occurring chiefly in barks and leaves, sometimes in globular masses. The juice of opium has no starch or tannin, while that of catechu has 40 per cent. tannin; pinus canadensis, 14 per cent.; kino and red gum, 45 to 55 per cent. The purgative derivatives of anthraquinone comprise emodin (rhubarb, aloes, senna, frangula) and the neutral "chrysophanic acid" (senna, cascara sagrada, rhubarb). These dissolve readily in alkalies (set free by alkalies of intestine), giving a red color (alkaline urine). Purshianin, the most important constituent of cascara sagrada, contains an irritant ferment acid (gripes and pukes), which disappears on heating a few hours at 110° or on keeping a year or two.

The glucosides of digitalis are more soluble in water than in alcohol, digitonin serving as a saponin principle to render the others absorbable. Digitalin is the chief constituent of amorphous digitalin; digitoxin, of the crystalline. In old infusions and when the leaves are stored damp, digitalin, digitalein, and digitoxin decompose into resins acting like picrotoxin.

The bitter principle elaterin constitutes 44 per cent. of elaterium. The neutral active principle (kosotoxin) of cusso is present only in the female

inflorescence. Capsaicin, the most important part of capsicum, is a neutral crystalline principle extracted with benzin or gasolin. The quassins are good examples of neutral bitters. Colocynth has 6 per cent. of the active bitter body colocynthin, which by decomposition yields colocynthein (still more active).

In the botanic sense gum means any vegetable exudation: as gum camphor, a stearopten; gum guaiac, a resin. Chemically speaking, gums are very common vegetable products precipitable by alcohol and transformable into glucose. The acacia type of gums, soluble in water, are compounds of calcium or magnesium and potassium with arabic or gummic acid. The cerasin and bassorin groups are closely related to plant mucilages and pectin bodies. The gummy material of chondrus forms a jelly upon boiling and cooling. Ulmus, cinnamon, and buchu have a noteworthy amount of mucilage. Volatile oils, resins, balsams and camphors are important and abundant constituents of plants. They are closely related (by oxidation processes) and very complex mixtures of compounds. The essential oils (oxygenated compounds) constitute in general the odorous principles of plants; in flowers they are present at the base of glandular hairs. Many consist of a liquid eleopten and a solid stearopten. The terpenes present are not so important physiologically as the ketones, phenols, nitrils and thiocyanates. Their antiseptic virtues are due to phenols (thymol, eugenol, anethol, carvacrol). Of frequent occurrence in volatile oils are certain esters, particularly methyl salicylate, linalool, geraniol, and benzyl alcohol (balsams).

Fresh cubebs contain 10 to 16 per cent. of ethereal oil. Sassafras bark has about 5 per cent., and sandalwood 2 to 5 per cent. The volatile oil in buchu amounts to 1.5 per cent. from the short leaves; 0.5 per cent. from the long leaves. The volatile oil (ester, 0.5 per cent.) of gaultheria is its most important principle. The volatile oil (mostly eugenol and eugenic acid) of cloves is the active principle. Essential oils are especially prominent in peppermint, spearmint, pepper, pimenta, capsicum, cardamom, coriander, anise, star anise, caraway, fennel, wormseed, vanilla, juniper, saw palmetto, lemon peel, and both sweet and bitter orange peel. The pungency of pepper, however, is not due to the oil it contains, but to the alkaloid piperine, which becomes pungent on dissolving; and to the resin chavicin. The ethereal oil of asafoetida contains up to 30 per cent. of sulphur.

Resins are often dissolved in volatile oils (oleo-resins). They give a characteristic brown or yellowish color to plant products, and tend to darken with age. They are derived partly from retrograde metamorphosis of tannins, cellulose, and starch. Resin cells are often lined with cork.

Guaiac wood is about one fourth resin acids. The bitter, grining resin contained in senna can be removed by percolating the leaves with alcohol. The active principle of cannabis indica is cannabinol, an oily red resin which oxidizes on exposure to air to a black, inactive pitch. The ripe fruit of podophyllum is not purgative (contains no resin).

Balsams are marked by the presence of benzylic cinnamate and benzoate (benzoin, 18 per cent. benzoic acid). Balsam of tolu has also vanillin and a

little volatile oil. The gum resin myrrh contains 2 to 4 per cent. volatile oil, on which its value chiefly depends.

Among the more important camphors, or stearoptens, are camphor, a ketone; thymol, a phenol; menthol, a secondary alcohol; and apiol, from parsley. Pulsatilla contains an acrid, vesicating camphor which yields anemonin.

Fixed oils and fats (chiefly olein, palmitin and stearin) occur in seeds as reserve material in the protoplasm or as droplets free in the cells. Both sweet and bitter almonds are about half oil and one fourth proteid; also, in bitter almond, are the glucoside amygdalin (2 to 3 per cent.) and the ferment emulsin. This oil, by maceration and subsequent distillation, yields one fourth as much hydrocyanic acid, to which its action is due principally. White mustard seed has 25 per cent. of fixed oil; also sinapin sulphocyanid and sinalbin, which, by decomposition, yields an acrid, volatile oil. Black mustard has the same ingredients, except, in place of sinalbin, sinigrin, which, with water, splits into the volatile oil of mustard, a potassium salt and sugar. Theobroma, croton tiglium kernels, and ricinus yield about 50 per cent. of fixed oil; the poisonous ricin is not present in castor oil. Digitalis leaves contain about 5 per cent. fat, which is said to delay absorption and irritate the stomach. Pareira root has 8 per cent. of fat. Most vegetable oils contain a little cholesterol in various forms.

Waxes are derivatives of the higher aliphatic hydrocarbons, and consist of a combination of acids with alcohols other than glycerin. They form a protective coating on many leaves. The green epidermis of plants contains much waxy cerin, which becomes corky with age.

Starch is the most widely distributed solid substance in the cells of vegetable drugs, but is of no medical importance. There is practically none in acacia, gentian, senega, squill, nux vomica, and cinchona, and little, if any, in flowers. There is much starch in ginger (20 per cent.), althea (35 per cent.), licorice, belladonna and physostigma (49 per cent.). Inulin, which is allied to starch, abounds in the underground portions of the compositæ, occurring in solution here; pyrethrum root has 50 per cent., taraxacum (in autumn) 20 per cent. Cetraria contains 70 per cent. of starch like lichenin. Glucose is present in varying proportions in the larger number of vegetable drugs; invert sugar in fruits and honey. Manna is a sweet exudate from fraxinus ornus.

The coloring matters of plants are of no direct therapeutical value, and appear to be chiefly benzol derivatives. The brown phlobaphenes, or resinoids, give color to most barks. Color granules are often visible with the microscope—bright yellow berberin in golden seal; red granules in sanguinaria. Some woods (logwood, santal) contain colorless crystals which turn red on oxidation. Chlorophyl comprises the blue green chlorophyl proper and the yellowish xanthophyl. If leaves dry very slowly, oxidases and organic acids change their color to yellow or brown. The bright color is retained by some secret process. The juice of belladonna, after boiling and filtering, remains green; it turns dark and muddy if the boiling is omitted. Red hues (often interchanging with

blue) serve as a protection against cold, and frequently appear after wounds of the plant tissues. They are most prominent in plants and parts of plants rich in sugar.

In the disintegration of plants, as in constructive metabolism, the widely distributed ferments (oxidase, diastase, cellulase, lipase, etc.) doubtless play an important role. The odor of a plant, as in belladonna and tobacco, is often developed after its collection. A curious phenomenon, not fully understood, is the gelatinization of certain fluid extracts (red gum, hydrastis, kino, catechu) on standing or in contact with oxidizing agents (potassium permanganate).

According to the writer's count, there are indexed in the eighth decennial revision of the *Pharmacopœia of the United States* 157 medicinal plants. Although the present revision shows a commendable reduction in the total number of titles, this elision might be carried much further with benefit to all concerned. For example, I find herein 16 plants which owe practically all their value to contained tannic acid. Why should we not restrict these preparations to a much smaller number, or use tannin itself? Given with milk it is tasteless, and is liberated in the intestines, where its action is desired in most instances. By using fewer drugs we should learn to employ them with the confidence and certainty with which the surgeon manipulates his instruments.

1618 GLENARM.

REPORT ON THE INSANITARY CONDITION OF VARIOUS TOWNS IN THE COLONY OF ANGOLA.*

By F. CREIGHTON WELLMAN, M. D.,

ANGOLA, WEST AFRICA.

The phrase "fifty years behind the times" and similar sayings are not uncommon when speaking of ignorant or conservative communities. The following facts concerning the conditions obtaining in Portuguese West Africa may possibly tempt the reader to search for a stronger expression. In the colony under consideration there exists an almost entire absence of any of the provisions with which sanitary science has furnished us for protecting the lives and health of human beings living in close proximity. I can probably best illustrate this statement by taking as a type of the Portuguese West African town the city of Catumbella, with which I am perhaps best acquainted. This town lies about sixteen miles from the sea coast and is the first station of the new railway now being built from Lobito Bay to the interior via Benguella and Caconda. I shall take up in order its water supply, the disposal of excreta, the dust question, drainage, irrigation, swamps, and mosquitoes, touching briefly upon each of these points and then in a few words extending my remarks to other towns and cities of the colony.

WATER SUPPLY.—The water for the city is drawn from the Catumbella river. There is a pumping station on the banks of the river a little distance above the town. The water is simply run to the station and then pumped into the town. No at-

* Published under the auspices of the American Society of Tropical Medicine.

tempts at settling, filtration or other methods of purification are made. Much of that part of the town near the river receives its water direct from the stream by means of water carriers. The water is muddy, flat tasting and bad smelling. It is generally filtered through "Mossamades stone" before drinking, but the stone is so porous that bacteria undoubtedly pass, and except for the possible removal of the ova of entozoa no advantage is gained save in the appearance of the water. On the banks of the river above the pumping station at a point called Esupua are the permanent camping places of the thousands of native rubber, ivory, and slave traders, and porters who are constantly coming and going between the coast and the interior, hundreds of them arriving in Catumbella every day. I have spent the night at Esupua, which is the last camp before reaching Catumbella when coming from the interior. Not caring to occupy all the space placed by the editor at my disposal with an enumeration of the sights and smells of one locality, I shall leave the condition of Esupua (which is under no supervision whatever) to my reader's imagination, contenting myself with stating that one must be careful in venturing out of camp to avoid stepping in fæces, and that on one occasion I saw there three dead bodies of slaves who had perished on the march, lying by the side of the river. I should also mention, before passing to my next point, that the natives are allowed to bathe where they please, and I have seen them bathing at a point in the river just above the pumping station.

DISPOSAL OF EXCRETA.—I have used this conventional term which is something of a misnomer here, unless permitting defæcation on the edges of the town, in the streets or even in the compounds of the trading houses may be properly designated as "disposal." The European part of the town defæcates in "basios," which are tall metal, granite ware pots which may be emptied every day or only when full, according to the taste of the owner. At any time of the day, but generally in the evening, one may if his nose allow him to venture into any of the by-streets, meet with these pots on the heads of slaves (who are always spoken of, in deference to the Berlin Treaty, as contract servants), being carried to the place of disposal. The place of disposal seems to be almost any situation, but generally the edges of the town and near the river. As to the native fixed and transient population no provision whatever is made for them. There is not, so far as I know, a latrine of any kind in the town. In the day time the blacks seem to prefer the slopes above the town on the sides of the hills (Catumbella lies in a narrow valley with the hills almost within stone's throw of the principal streets), but at night they never go so far. After dark they use the back and even the main streets and sometimes, as I have mentioned, the compounds in which they sleep. In order to urinate no one, white or black, seems to think of retiring either from the public view or proximity to the main buildings of the town. I have more than once watched a white man stand in the door of his place of business and urinate into the street. The result of all this is, not to mention smells again, hordes of different sorts of flies (principally *sarcophagidæ* and *anthomyidæ*, both of which I have demonstrated to be the cause of some

terrible forms of myiasis occasionally seen here) and other evils too numerous to specify.

DUST AND DRAINAGE.—In the dry season each slight wind raises a natural cloud of dust, and in the early morning the long suffering visitor, who has unwillingly arisen early and repaired to the upper veranda to escape the intolerable heat of his bedroom, has his nostrils greeted by an extra and artificial cloud of the same dust raised by the women who sweep the dry streets with twig brooms. In the wet season floods of water sweep down from the hills bearing on their bosom the pollution accumulated during months of the processes described under the preceding heading. Mosquitoes flourish in great numbers from pools caused by rain (the town site is very flat), the waste from the native water tap, and the swamps and irrigation ditches about to be mentioned. In some seasons I have been forced, when in Catumbella, to have a mosquito curtain arranged over my bath in order to enjoy my tub in comfort.

IRRIGATION SWAMPS AND MOSQUITOES.—Irrigation is allowed without any restrictions or supervision. A large rum plantation lies on the very edge of the town site. Swamps receive no attention whatever and the banks of the slow flowing river are left to their own devices. Mosquitoes, among which I have noticed two different *Anopheletes*, *Myzomyia funesta*, *Cellia* and a species of *Pyreptophorus* (? *Austeni*) not to mention *Culicides*—abound throughout the year. I have no statistics as to the disease incidence of the place, but the town has an evil reputation for pernicious malarial attacks and black water fever.

I have not spoken in this report of the neglect of undergrowth near the river, the allowing of native quarters in the closest proximity to the European, the poor ventilation afforded by the style of house preferred by the Portuguese, the arrangements for killing animals, the typical Portuguese hospitality and personal habits, as well as various other points of comparative insignificance beside the fearful general conditions tolerated throughout the city. The foregoing remarks apply more or less to the other towns and cities in this colony which I have visited and which include the cities of Loanda and Benguella, the ports of Ambriz, Landana, and Novo Redondo, besides the interior towns of Malange, Lucalla, and Quissol. The amazing ignorance and apathy of the Portuguese government and people in allowing important points, which might be made healthy and prosperous, to remain "death holes" like Catumbella, seems almost incredible in this age of sanitary progress and general education.

Plague Researches.—(1) M. Herzog, from experience of plague gained in the Philippines, finds a hyaline fibrin thrombosis in the glomeruli of the kidney; in post mortem examination of seven out of twenty cases of plague, Dr. Herzog believes that plague is not a true septicæmia, but a local lymphatic infection, and that the universal dissemination of the infecting bacilli through the blood current generally only occurs during the agonal stage. (2) R. P. Strong has succeeded in preparing a vaccine against plague. He uses the living plague organisms in his protective inoculations. So far, the experiment has proved successful in rats.—*Manila Medical Society*, November 22, 1905, through *The Journal of Tropical Medicine*.

Therapeutical Notes.

The Effect of Small Quantities of Alcohol Upon the Human Brain.—In a recently published lecture by Victor Horsley, the statement is made that "one prominent defect in the study of the alcohol question has always been the want of scientific proof that small quantities of alcohol, such as are used every day in ordinary diet, have any appreciable adverse effect upon our organism. That defect has now been supplied. We have it definitely established by the precise and more delicate investigations of the last ten or fifteen years that it is indeed the case. From a scientific standpoint, therefore, the contention, which we have so often had put before us by our friends, that small doses of alcohol, such as people take at meals, have practically no deleterious effect, cannot be maintained."—Review in *Glasgow Medical Journal*, March, 1906.

Serum Therapy in Typhoid Fever in Young Children.—M. Josias reported to the Paris Academy of Medicine (*La Tribune médicale*, March 10th) that for four years antityphoid serum has been used in the Hôpital Bretonneau in the treatment of children suffering with typhoid fever. In the period previous, under the cold bath treatment, the mortality was from ten to twelve per cent. Since the serum injections have been used with the baths, the mortality has fallen (in nearly 200 cases) to 3.3 per cent. In 1,031 cases treated in other hospitals, where serum therapy was not practised, the mortality was 12.6 per cent. The reporter felt justified in claiming that the treatment was inoffensive, and that when applied early in conjunction with the baths, the chances for recovery are superior to those in cases treated by the baths alone.

Death Following Hypodermic Injection of Scopolamine and Morphine.—A case is reported by J. C. Sexton, of Rushville, Ind. (*Lancet-Clinic*, November, 1905), in which a fatal result followed a single injection of one hundredth of a grain of scopolamine hydrobromate with one sixth of a grain of morphine sulphate. The patient, forty-seven years of age, was anæmic and had a weak heart; but presented no appearance of disease, except that for which the operation was proposed, excessive bleeding from a uterine fibroid. Early in the morning the hypodermic injection was given, and in fifteen minutes she was asleep. In fifteen minutes more she was unconscious, pulse 120 and throbbing, with shallow respiration 20 to the minute, while the abdominal muscles and intercostals were so rigid that it was found impossible to compress the chest for artificial respiration. All efforts at resuscitation failed, and the patient died an hour and a quarter later. No autopsy was permitted.

Fatalities from Morphine-Scopolamine Anæsthesia.—Viron and Morel (*Le Progrès médical*, February 17, 1906) review the subject of general anæsthesia by injections of scopolamine and morphine, and report a total of twenty-five deaths directly due to this method, and a much greater number of serious accidents which ended in recovery out of a maximum of 2,000 cases. The

use of scopolamine in this manner, even with the greatest care, is condemned as uncertain and dangerous. Death is caused either through the heart or the medulla oblongata. It occurs through the heart by disturbing its function and its structure. Stella, in 1897, showed that scopolamine, like atropine and hyosine, paralyzes the cardiac regulating fibres of the pneumogastric, and determines a fatty degeneration of the myocardium. It occurs through the medulla because scopolamine, which begins by exciting the respiratory centres, ends by inhibiting these centres. Respiratory disturbance, Cheyne-Stokes respiration, cessation of breathing, either momentary or definite, has been frequently noticed. The death rate is higher than that of chloroform.

The Influence of Calcium Chloride Upon Bacterial Hæmolysins.—Vincent, Dopter, and Billet declare that calcium chloride favors hæmolysis of bacterial origin (tetanolysin, staphylolysin, typholysin, lysin of the bacillus megaterium, etc.). It also increases or excites the hæmolysing action of these hæmolysins, where they have become weakened by age, exposure to air or to light, and have become inactive. Furthermore, it manifests the same influence in the presence of those microbes which normally secrete either very little hæmolysin or none at all, such as the bacilli of diphtheria, of anthrax, of plague, of dysentery, etc., and even in presence of common saprophytes ordinarily inoffensive, such as bacillus mesentericus, micrococcus prodigiosus, bacillus mucoides, bacillus violaceus, etc., which, without the addition of calcium chloride, have no effect upon the red corpuscles. It, therefore, follows that the therapeutical employment of calcium chloride, which is to be recommended in certain intoxications (quinine, antipyrine, etc.), is, on the contrary, to be forbidden in hæmoglobinæmia of bacterial origin.—*La Tribune médicale*, March 10, 1906.

Alcohol Compresses for Wounds.—Pfuhl (*Zeitschrift für Hygiene und Infektionskrankheiten*, xlvii, No. 3) claims that alcohol dressings are at once the simplest, best, and cheapest method of treating inflamed and suppurating wounds of the soft parts, whether superficial or deep. It is a specific with regard to its action upon buboes of a venereal character. Also in inflammations of joints and the large internal organs, alcohol compresses have a favorable influence. The disinfecting power of alcohol increases with successive addition of water up to forty or fifty per cent., above this proportion of water, it again is reduced. In elevated temperature, its action becomes stronger. For the treatment of open wounds, he recommends a fifty per cent. watery mixture; but in cases with unbroken skin, he prefers from ninety to ninety-six per cent. alcohol. When alcohol is merely poured over the skin, only a very little is absorbed; whereas alcohol moist dressings have a much greater capacity for penetration. Whether the good results are to be entirely attributed to disinfection, or partly to the rousing of the protective power of the tissues, the author leaves undecided.—*Berliner klinische Wochenschrift*, 1906, No. 7.

Poisoning by Wood Alcohol.—At the annual meeting of the Livadian physicians (*St. Petersburg medizinische Wochenschrift*, February 24, 1906), C. Stromberg called attention to the extensive employment of wood alcohol in the domestic arts and the frequency of its use as an intoxicant, especially in Russia. Last year he had reported sixteen cases of poisoning by methyl alcohol, and to this list he now added two recent cases. One of these had acquired the habit (while working in a cabinet shop) of drinking furniture polish, made with shellac and wood alcohol. He was taken sick one afternoon (June 17, 1905) with general weakness and drowsiness. The next day he was worse and was vomiting. Following this he complained of headache, general weakness, sleepiness, thirst, abdominal pain, and nausea. In the morning, when admitted into the hospital, he had a cloud over his sight which increased so that on the following day he was totally blind. His face, especially the nose, was somewhat cyanotic and flushed, as were also the hands. The pupils were dilated to the maximum. The sight was reduced to a faint perception of light, he could scarcely tell in what direction the window was situated. Slight erosions were seen on the lips and tongue. The pulse was regular, weak, 78 in the minute. He was restless, thirsty, and vomited a greenish material, without characteristic odor. Respiration irregular and sighing. No sweating. After a warm bath he vomited again, then had some sleep; but complained of increased pain in the abdomen. He then had cramps of the arms, neck, and face, and this was followed by loss of consciousness and pulmonary œdema. He died on the morning of June 19th from another attack of convulsions. No urine had been passed while in the hospital. At the autopsy there were found œdema of the lungs, ecchymoses of the heart, and of the gastric mucosa and congestion of the bladder. No formic acid was found in the urine. There was general hyperæmia of the brain and spinal cord, also of the meninges. Attention is directed to the sudden onset of the symptoms with prostration, vomiting, cramps in the abdomen, and loss of sight. The reporter also referred to a case of a woman, of Omaha, Neb., who for several months had used wood spirits in a night lamp in her bedroom, and who, as the result, became blind. According to the reporter, restrictions should be placed upon the sale of methyl alcohol, and the public be made better acquainted with its danger.

Treatment of Infantile Eclampsia.—In a contribution to the *Practitioner* (October, 1905), John Thompson divides the common clinical forms of infantile convulsions into five classes: (1) Those resulting from birth injury, which require only hygienic and expectant treatment; (2) those symptomatic of gastrointestinal disorder, demanding regulation of diet, modified or peptonized milk, occasionally calomel, and lavage. The best treatment is a wet nurse. (3) Those with reflex, or undiscovered, causes. The spasms begin in early infancy, and usually increase in frequency (twenty to forty in a day). For these chloral hydrate is used in full doses (for the youngest babies one grain every two hours; and

one to two grains for children of one or two months of age). The drug should be continued until the fits have ceased for twenty-four or thirty-six hours, and then it is to be gradually diminished. Usually after chloral is given for three or four days at most, the fits cease and do not return. The child should be under the influence of the drug sufficiently to make it drowsy, but not too drowsy to swallow. In feeding be careful to avoid inhalation pneumonia. (4) Those from rickets. These require proper diet, cod liver oil, with or without phosphorus, and a fresh air life. (5) Those from cerebral defects, which are not amenable to treatment, although country life, tonics, and sometimes thyroid extract may be helpful. As regards the treatment of the attack, Edmund Cautley (*Clinical Journal*, September 6 and 13, 1905) gives the following details: As soon as the fit starts, the child should be laid down with the head a little raised and the clothes loosened or removed. Avoid all excitement or disturbance. A warm bath (95° to 100° F.) may be given especially in cases attended with colic; but not in cases of syncope or in pulmonary collapse. Cold affusions should be applied to the head while in the bath. Chloroform is administered to allay the spasms, and any disorder of the alimentary tract is treated. The large intestine may be irrigated with saline solution or a glycerin enema given. After the bowels are evacuated, chloral hydrate 0.20 to 0.65 gramme (3 to 10 grains), according to age, should be given by the rectum. With each dose of this double the quantity of potassium bromide may be combined. The enema may be repeated at the end of an hour. If it should not be retained, morphine sulphate 0.003 gramme (0.05 grain) may be given hypodermically to a strong child of six months. Chloroform is continued by inhalation until the chloral, or morphine, begins to act. If there is indigestible food in the stomach, vomiting should be induced by tickling the fauces; but emetics should not be given at this stage. Calomel should be given as soon as the child can swallow. If there is cerebral congestion, lancing the gums may be beneficial as a mode of bleeding. Leeches are of use in the uræmia of older children; but children do not stand bleeding well. When the secretion of urine becomes abundant, active treatment can be discontinued. The child should be kept quiet for a few days after the attacks, and on a light diet. Moderate doses of chloral, or of potassium bromide, or both together, may be given, or ethyl carbonate instead. Belladonna may be given with the bromides. All sources of reflex irritation should be attended to, and any definite disease treated. The most useful drugs in preventing attacks of infantile convulsions are cod liver oil, malt, and iron, which improve the general condition. For epilepsy in older children the bromides should be given for at least two years; and with this there should be a privation of sodium chloride from the diet. Constipation and intestinal disorders are to be overcome and intestinal antiseptics given. The diet should be plain, unseasoned, and contain very little meat. —*American Journal of Obstetrics*, liii, No. 3.

NEW YORK MEDICAL JOURNAL

INCORPORATING THE

Philadelphia Medical Journal
and The Medical News.*A Weekly Review of Medicine.*

Edited by

FRANK P. FOSTER, M. D.,
and SMITH ELY JELLIFFE, M. D.

Address all business communications to

A. R. ELLIOTT PUBLISHING COMPANY,

Publishers.

66 West Broadway, New York.

PHILADELPHIA OFFICE:

10 N. 3rd Street.

CHICAGO OFFICE:

221 Randolph Street.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, MARCH 31, 1906.

PENDING LEGISLATION IN THE STATE OF
NEW YORK.

There is now pending in the legislature of the State of New York a bill which, if it becomes law, will work some radical changes in the licensing of physicians. It was introduced into the Assembly on March 22nd by the Committee on Public Health, ordered to be printed, and referred back to the committee. It seeks to do away with the State Board of Medical Examiners as now constituted (representing the Medical Society of the State of New York, the Homœopathic Medical Society of the State of New York, and the Eclectic Medical Society of the State of New York) and to substitute for that board one consisting of nine members to be appointed by the Board of Regents of the University of the State of New York irrespective of sectarian affiliations. In cases in which the board examines candidates for the license as to their proficiency the examinations are to include the subjects of surgery, obstetrics, gynecology, pathology, diagnosis, bacteriology, and medical jurisprudence. It will be noticed that materia medica and therapeutics are omitted. The committee's assumption is understood to be that anybody who, besides fulfilling the other requirements substantially as they stand at the present time, can pass a satisfactory examination in the branches specified in the bill is a safe person to license without regard to his belief as to therapeutics.

The bill is said to owe its origin to the fact that the committee is tired of the ever recurring

measures proposed for modifying the licensing process and thinks that the bill, should it be enacted, will put an end to such proposals, will act as a sufficient safeguard to the public, and will simplify the relations between medicine and the State. It seems quite possible that it would accomplish all those objects, and certainly they are worthy ones. It is not easy, however, to foresee all the results of such a law, and it would be little better than guesswork to attempt to foretell the attitude of the various "schools" of medicine toward the provisions of the bill. One thing, however, is reasonably certain, namely, that the medical profession of the State has thoroughly learned the lesson that it is better to accept legislation that is not positively detrimental than to present a divided front before the legislature. And, really, we need care little about a licensee's therapeutical predilections, provided the State assures us that he is well educated. There is no system that will enable the State to ascertain to any very great extent that a candidate for the license is possessed of good judgment; that the people will always have to find out for themselves. If a man is well grounded in knowledge, the presumption is that he is not likely to go far wrong and that wisdom will come to him in time.

SCHOOL CHILDREN AND THEIR HEALTH.

Not very long ago the child who asserted that he was "too sick to go to school, but not too sick to play," would have met with scant sympathy; he would have been packed off to school without any more words on the subject. Now, when compulsory education laws are in force, and truant officers hunt up delinquents and send them to school, the pædologists find themselves frequently in a dilemma. First, the health boards refuse to allow the child to enter the class rooms unless he has satisfactory proofs of successful vaccination. Nobody competent to form an opinion upon the subject will question the expediency of this rule; it has been abundantly justified by its results in diminishing the ravages of smallpox. At the same time, unvaccinated children, in the absence of compulsory vaccination, must enjoy an enforced holiday, for the child labor laws will not permit them to be sent to work in early school age.

The vigilance of the health boards has in most of our large cities provided medical inspectors to examine children at the schools, and they have authority to exclude temporarily all cases of suspicious appearance, such as sore throat and incipient contagious disease, as well as actual ill-

ness. Many children whose parents deem them well enough to be sent to school are promptly sent home again, for their own welfare or the protection of others. When bacterial examination becomes so simplified as to form part of the routine office examination, it is probable that many children who are the unconscious bearers of the Klebs-Loeffler bacillus or the virulent forms of streptococci will be sent away to be quarantined and disinfected, who now are allowed to associate freely with other children.

The conviction is growing in the community that many children are handicapped in their studies by removable physical abnormalities which humanity requires should be corrected. For instance, the Netherlands government has just finished an investigation into the frequency of the occurrence of adenoid vegetations in the vault of the pharynx among school children. Examination of 800,000 scholars revealed the presence of these growths in six per cent., which agrees with the statistical study of Gottsteine and Kayser among 15,000 school children. These figures, however, are based upon external signs, and are much below the results obtained from rhinoscopic and digital examination, according to Burger, of Amsterdam (*Revue hebdomadaire de laryngologie, d'otologie et de rhinologie*, March 3rd), who, from a study of the statistics of different observers, places the number as high as 29.8 per cent. Other observers place it still higher, the larger proportion being among girls.

Another large class of defective school children deserving sympathy are those with remediable eye trouble. These are so patent and the means of relief so accessible, that where parents refuse to provide suitable glasses for their children, they should be compelled to do so. In Philadelphia the health authorities are now moving for a law to compel legal guardians to provide spectacles for children with defective eyesight, so that they may keep up in their studies.

FELIX ADLER ON OLD AGE.

We do not remember ever to have read one of Dr. Felix Adler's addresses without feeling at the same time chastened and lifted up by its general tenor, even if it chanced to contain here and there an expression that grated on us. One of them that has recently been received, entitled *The Spiritual Attitude Toward Old Age*, being No. 12 of the *Ethical Pamphlets* published by the New York Society for Ethical Culture, seems to us to be a striking example of Dr. Adler's spirit of humanity and of his power to elevate the minds of his fellow men. It appears to have been

called forth by the appearance of a charming collection of excerpts, arranged by Dr. Camac, from the writings of Dr. William Osler, entitled *Counsels and Ideals*, of which we have already expressed our admiration. But that little book seems to have been to Dr. Adler only a reminder, for in his address he deals with the subject of certain famous utterances of Dr. Osler's concerning the decadence that he held to be inseparable from old age—utterances which, in spite of some early misquotation and misapprehension, are now so well understood that we need not specify what they were.

Dr. Adler cites the names of several renowned men in addition to the many that have been mentioned by others as having done wonderful work after they had passed the age at which, according to Dr. Osler, man enters upon the downward path. To the possible objection that "these are the illustrious men" and therefore, by implication, quite exceptional, he answers: "To be sure; but the great creative work has been done by the few, and if we can point out a few of these few who have done the greater part of their work in the latter period of their lives, such a reply is certainly pertinent." Judgment, he goes on to say, is a quality far in advance of quickness of perception and apprehension, and one that can hardly be acquired except as the result of experience. "It is judgment," he says, "that distinguishes the seasoned man from the novice, and it cannot be acquired from a study of textbooks and formulas."

Then there is the moral aspect of the life of the aged. While Dr. Adler admits that there are "plenty of old men who are no better than old fools," and that there are those "who decline and decay, and become miserable and fretful and more and more intolerable to others," he maintains that he who "grows old gracefully" becomes a finer person than he was in the prime of his vigor. "The outer shell," he says, "decays, but the inner self does not decay. The outer garment becomes threadbare and rent, but the soul looks out from behind those hollow eyes and the mask of the wrinkled face—the soul intact, the centre of life, more concentrated, more luminous."

THE ABSORPTION OF DRUGS BY THE VAGINA.

When medicaments are placed in the vagina and their absorption through the vaginal mucous membrane is inferred from their subsequent detection in the urine or from the occurrence of general symptoms recognized as those caused by the drug, it is not always certain that they have

not passed up through the uterus, unless the os uteri has been closed. This is the only possible source of fallacy that we see in certain experiments reported by Henges (*Zeitschrift für experimentelle Pathologie und Therapie; Berliner klinische Wochenschrift*, March 5th). But the experiments are of practical value irrespective of the route of absorption.

Henges employed a great number of drugs, twenty-six in all, including iodine, antipyrine and other antipyretics, quinine, paraldehyde, chloral hydrate, and atropine, introduced into the vagina either dry or in solution. The author thinks it is shown by these experiments and by recorded cases of poisoning with drugs inserted in the vagina that medicaments are absorbed by the vaginal mucous membrane. When the drugs are introduced in the dry state, their absorption occurs slowly or not at all; when they are dissolved, absorption goes on more rapidly, and it seems to be accelerated by the ready absorbability of the solvent and by the greatest possible concentration of the solution. In general the effects of drugs deposited in the vagina are less pronounced than those of the same substances administered subcutaneously, by the mouth, or by the rectum.

The author seems warranted in two deductions which he draws from his experiments, namely, that medication by way of the vagina may be resorted to when the gastrointestinal canal is not in condition to serve, and that great care must be observed in the employment of poisonous substances for their local effect on the vagina. It will readily occur to the reader that there are many harmless medicaments that might to advantage be inserted into the vagina, a very tolerant canal, with a view to their absorption and consequent action on the system at large. Among them would be included nauseous preparations of which the dose is large.

DENUATION OF THE SCIATIC NERVE.

A Danish physician, Dr. A. Pers (cited in the *Semaine médicale* for February 21st), has in two instances produced excellent results in sciatica by denuding the nerve instead of stretching it, stretching of the nerve having failed in so many cases that it is now seldom employed.

One of his patients was a man and the other a woman, and both had suffered with sciatica for rather a long time. Having cut down upon the nerve, Pers found that it was covered with fine cellular tissue of a reddish color, so that the nerve no longer had its natural ivory color and was adherent to the neighboring structures. He liberated the nerve by dissecting away this cellular

tissue as far as it extended, from the great sciatic notch to the middle or the lower third of the femur. After this dissection the wound was closed without the nerve having been subjected to any other strain than the slight tension necessarily involved in the operative manœuvres.

In both cases the results were good. For the first few days the patients still complained of some pain, especially in the hip, but as soon as the wound was cicatrized the functional capability of the limb was perfect, or rapidly became so, and in one of the cases the cure is known to have been complete after the lapse of a year. It is not quite clear from the account whether the cellular tissue mentioned was removed altogether or simply cut loose from the nerve, but in either case the essential feature of Pers's operation seems to have been the mere denudation of the nerve. It will be interesting to know if the procedure proves effective in further trials.

THE RELATION OF THE MESENTERIC GLANDS TO TUBERCULOUS DISEASE.

In 1903 von Behring maintained that the majority of cases of pulmonary tuberculosis were due to an infection which was acquired in infancy from food and remained latent up to the time of the development of symptoms. While this statement is possibly not true of the majority of cases, it may be true of some. In this relation the recent study by Rosenberger (*Proceedings of the Pathological Society of Philadelphia*, N. S., viii, 5, 1905) of the mesenteric glands in seventy necropsies is of interest. The study was made with the object of determining the incidence of tuberculous disease of these glands in cases of the same disease elsewhere in the body and in cases in which gross tuberculous lesions could not be determined in the various organs of the body. The glands were scraped, and smears made from the scrapings were stained for tubercle bacilli. Fragments of the glands, after being macerated in bouillon, were inoculated into guinea pigs. In forty-nine of the cases tuberculous foci were found somewhere in the body and in the twenty-one other cases no gross tuberculous lesions could be detected. As a result of the study of these structures by these methods the investigator concludes that in all cases of active and in almost all cases of inactive tuberculous disease the mesenteric glands are capable of infecting guinea pigs; that the mesenteric glands in these cases may or may not show gross evidence of tuberculous disease or tubercle bacilli in spreads, the result of such a search not being distinctive so far as the production of the disease is concerned;

that the mesenteric glands in a certain percentage of cases that show no tuberculous lesions in any part of the body produce the disease when inoculated—in the present study the percentage was about 40; and that the tuberculous infectivity of the mesenteric glands is probably shared by the other groups of lymph nodes throughout the body.

THE DOCTORS OF SHAKESPEARE.

Of the thirty-seven undisputed plays of Shakespeare, physicians appear in the dramatis personæ of five. These are the *Merry Wives of Windsor*, *King Lear*, *Macbeth*, *Cymbeline*, and *Henry VIII*. In *Macbeth* there are two, an English and a Scotch doctor, neither of whom is much of a credit to the profession of their time. One humbly admits the superiority of the king's miraculous touch to all the resources of his art for the cure of scrofula, a remedy practised for the king's evil in England as late as in the reign of Queen Anne. The other is worse than confounded by the somnambulism of Lady Macbeth in the sleep walking scene and admits that "this disease is beyond my practice." When appealed to for aid by Macbeth in the sonorous period beginning "Canst thou not minister to a mind diseased?" the doctor lamely and impotently replies "Therein must the patient minister to himself." This is an unusually frank acknowledgment of incompetency and shows an inexcusable lack of familiarity with the ordinary sedatives and hypnotic drugs which would have given Lady Macbeth at least temporary relief in her disturbed sleep and distressed nervous state. Such drugs were numerous enough in Shakespeare's day, as is shown by the powerful knock-out drops of Friar Laurence in *Romeo and Juliet*, which were administered to the youthful heroine with such fine effect. Henbane, theriac, opium, and probably also valerian were well known, and it seems a pity that Macbeth could not have had in consultation the physician of *King Lear*, who was far more resourceful, and would have been quick to prescribe for the unfortunate lady one of the many simples which he knew "whose power will close the eye of anguish."

Dr. Caius, the irascible French physician in the *Merry Wives of Windsor* and one of the aspirants for the hand of sweet Anne Page, is a good deal of a buffoon, and is made the victim of much of the horseplay of the comedy. Mistress Quickly, in urging Fenton's suit, asks Anne's mother "Nay, will you cast away your child on a fool, and a physician?" an argument which would imply that doctors were not then regarded

with much favor by ambitious mothers with marriageable daughters, a social estimate which has perhaps not entirely disappeared at the present day. Dr. Cornelius in *Cymbeline* was associated with the plotting queen in many curious experiments on animals. He has suspicions that her interest may not be solely that of a love for pure science, and declares that he will not trust "one of her malice with a drug of such damn'd nature which first, perchance, she'll prove on cats and dogs, then afterward up higher." It is interesting to note that a similar objection to animal experimentation has been raised by the latter day antivivisectionist. By substituting a harmless powder for the lethal draught the murderous stepmother had prepared, the doctor saves the life of fair Imogen. Dr. Butts, the royal physician in *Henry VIII*, is but lightly sketched and seems to have been little more than a boot licking parasite at the court of the polygamous prince. None of Shakespeare's physicians rise in point of characterization to the level of Chaucer's doctor in the Prologue to the *Canterbury Tales*. While he is not described in wholly complimentary terms, he is distinctly human in his qualities, seems a real person, and is curiously modern in many of his traits.

In al this world ne was ther non him lyk
To speke of phisik and of surgerye;
He knew the cause of every maladye,
Were it of hoot or cold, or moyste, or drye,
And where engendred, and of what humour;
He was a verrey parfight practisour.
Of his diete mesurable was he,
For it was of no superfluité
But of gret norisching and digestible.
His studie was but litel on the Bible.

Obituary.

ROBERT OGDEN DOREMUS, M. D., LL. D.,
OF NEW YORK.

Though Dr. Doremus's career was essentially that of a chemist, his long connection with medical schools as a professor of chemistry and his frequent service in forensic investigations made him thoroughly and most favorably known to his fellow physicians. His was a long and useful life, and it is not too much to say of him that he was largely instrumental in making the study of chemistry appreciated by medical students and physicians in New York at a time when chemistry was almost wholly neglected in medical schools. Of Dr. Doremus's great contributions to sanitary medicine most medical men are well aware. He was the first, we believe, to make use of the disinfecting properties of chlorine gas on a large scale in the disinfection of steamships, and he had the credit of abolishing the old detention of forty days, from which the word quarantine is derived.

News Items.

NEW YORK CITY AND STATE

Change of Address.—Dr. James J. Concanon, to 508 West One Hundred and Twelfth Street, New York.

The Spiritual Attitude Toward Old Age.—We learn that Dr. Felix Adler's address thus entitled may be had without charge upon application to the Publication and Extension Committee of the New York Society for Ethical Culture, 33 Central Park West.

The New York State Lunacy Commission.—It is reported that Dr. Charles W. Pilgrim, of the Hudson River State Hospital at Poughkeepsie, is likely to be appointed president of the commission, in place of Dr. William Mabon, recently appointed superintendent of the Manhattan State Hospital at Ward's Island.

The Lisbon Congress.—The American Dermatological Association has sent as its delegate to the congress to be held at Lisbon, Dr. Charles Warrenne Allen, of this city, who will read a paper on The Uses of High Frequency Currents in the Treatment of Epithelioma, Lupus, and Various Skin Diseases.

The Medical Society of the County of Ulster, N. Y.—A meeting of this society will be held at Kingston, on Tuesday evening, April 3rd. The programme includes the following titles: Diagnosis and Treatment of Gastric Ulcer, by Dr. Leo H. Neuman, of Albany; The Importance of an Early Diagnosis in Orthopædic Practice, by Dr. Wisner R. Townsend, of New York.

The Society of the Medical Inspectors of the City of New York.—A meeting of this society will be held at the Chemists' Club, 108 West Fifty-fifth Street, on Tuesday, April 3rd, at 8.30 p. m. The following is the programme for the meeting: A paper on The Work of the Department, illustrated by stereopticon views, by Dr. Thomas Darlington, commissioner of health; and a paper by Dr. John B. Huber, on the Diagnosis of Incipient Tuberculosis.

The Brooklyn Pædiatric Society (the Section in Pædiatrics of the Medical Society of the County of Kings).—The following programme was arranged for a meeting held on Wednesday, March 28th: Diagnosis of Diseases of the Bones and Joints in Children, by Dr. George F. Little; Demonstration of Congenital Heart Disease, by Dr. Alexander Spingarm; Case of Pseudoleucæmia Infantum, by Dr. Archibald D. Smith.

The Utica (N. Y.) Medical Club.—At a meeting of the club held on the evening of Thursday, March 15th, officers were elected as follows: President, Dr. Lewis B. Armsby; vice-president, Dr. Andrew Sloan; secretary and treasurer, Dr. W. S. Nelson. Dr. H. H. Shaw, the retiring president, read a paper on Scopolamine and Morphine as an Anæsthetic With or Without Chloroform. A general discussion followed the reading of the paper.

The Rochester (N. Y.) Academy of Medicine.—At a meeting of the *Section in Obstetrics, Gynecology and Pædiatrics*, held on Wednesday, March 21st, the following programme was presented: Technics of Accouchement Forcé, by Dr. J. K. Quigley (by invitation); Indications for Accouchement Forcé, by Dr. William M. Brown; Discussion opened by Dr. Frederick W. Zimmer. The programme prepared for a meeting of the *Section in Public Health*, held on Wednesday, March 28th, included a paper by Dr. DeLancey Rochester, of Buffalo, on The Hygienic Management of the Subjects of Chronic Nephritis.

Civil Service Examinations for the State and County Service.—The State Civil Service Commission announces examinations to be held on April 14, 1906, for the following positions: First Assistant Physician, State Hospital for Tuberculosis, \$1,500 and maintenance; Medical Superintendent, State Hospital for Tuberculosis, \$3,500 and maintenance for superintendent and his family; Physician, Westchester County Jail, \$400. Trained Nurse, State Institutions, usual salary, \$420 and maintenance; Zoölogist, State Museum, \$1,200. The last day for filing applications is April 9th. Application forms and detailed information may be obtained by addressing Charles S. Fowler, Chief Examiner of the Commission, at Albany.

The Mortality of New York City in 1905.—According to Health Department records, deaths in New York during 1905 numbered 73,714, giving a death rate of 18.31 in 1,000, made up by boroughs as follows: Manhattan, 18.74; the

Bronx, 20.25; Brooklyn, 17.57; Queens, 16.03; Richmond, 19.04. These figures were based on an estimated population of 4,024,780. As there were 103,881 births during 1905, the net gain over deaths, from this source, was 30,167. Almost exactly one third of all the deaths were of children under five years of age, 24,539; between thirty-five and forty was the next highest period, with a record of 4,355 deaths. Tuberculosis of the lungs caused the most deaths, 8,535. There were also 1,123 deaths from other forms of tuberculosis. During the year the large total of 20,831 cases of tuberculosis were reported—almost one third of all the cases of contagious diseases.

The Medical Society of the County of New York.—The programme arranged for a meeting held on Monday, March 26th, included the following titles: Presentation of a Case of Rhinoscleroma, by Dr. William S. Gottheil; Report of a Case of Complete Inversion of the Uterus, by Dr. J. Seymour Emans; A New Instrument for Measuring all the Diameters of the Pelvis in the Living Woman, by Dr. Sidney D. Jacobson; The Clinical Manifestations of the Toxæmia of Pregnancy, by Dr. J. Clifton Edgar; The Chemistry of the Toxæmia of Pregnancy, by Dr. C. G. L. Wolf; The Medical and Surgical Treatment of the Toxæmia of Pregnancy, by Dr. George L. Brodhead; Discussion by Dr. Egbert H. Grandin, Dr. S. Marks, Dr. Austin Flint, Jr. The centennial anniversary of the incorporation of this society will be celebrated on April 4, 1906, by a dinner. Prompt notification of intention to attend will materially aid the work of the committee of arrangements.

The Late Dr. Emmet Cooper Dent.—The members of the council of the American Medico-Psychological Association held a meeting at the Hotel Astor, New York city, on Tuesday, January 16, 1906, at which meeting they appointed, by formal resolution, a committee of three members of the association, consisting of Dr. William Austin Macy, Dr. George A. Smith, and Dr. Charles W. Pilgrim, to draw resolutions expressive of the loss of their late fellow member, and the late secretary of the association, Dr. Emmett Cooper Dent. The council further directed by resolution that the said committee cause a copy of the resolutions prepared by them to be forwarded to the immediate family of Dr. Dent, and that the said resolutions also be spread on the minutes of the association, and other copies be forwarded at once to the principal medical journals. The special committee appointed by the council have prepared the following resolutions: Whereas, By the death of our late associate, fellow member, and secretary, this association has been deprived of one of its most worthy members and progressive workers, and Whereas, We, his associates have lost a dearly beloved comrade, whom we honored for his integrity, uprightness of character, and sterling worth, whom we respected for his well known high standards in professional and in ordinary living, whom we admired for his unselfish devotion to all that made for a higher manhood, and for his steady and unflagging interest in the suffering humanity to which he ministered, and whom we all loved as an ever loyal friend and companion; therefore, be it Resolved, That we extend to the bereaved family our heartfelt sympathy in their grief and the assurance that his memory will ever remain cherished by us. (Signed), William Austin Macy, G. A. Smith, Charles W. Pilgrim.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department, for the following statement of new cases and deaths reported for the week ending March 24, 1906:

	Cases.	Deaths.
Typhoid fever.....	15	5
Measles.....	1	0
Scarlet fever.....	1	0
Varicella.....	159	1
Mumps.....	1,952	17
Scarlet fever.....	209	8
Whooping cough.....	25	2
Diphtheria.....	370	50
Typhus.....	453	200
Cerebrospinal meningitis.....	36	23
Totals.....	3,220	335

Society Meetings for the Coming Week:

MONDAY, April 2nd.—New York Academy of Medicine (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medi-

cine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association (annual); Providence, R. I., Medical Association; Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society (annual).

TUESDAY, April 3rd.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. Y., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, April 4th.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; New York Genitourinary Society; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn. Medical Association.

THURSDAY, April 5th.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, April 6th.—Manhattan Clinical Society, New York; Practitioners' Society of New York (private); Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, April 7th.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

PHILADELPHIA AND THE MIDDLE STATES

The Emergency Hospital of Easton, Pa., has been incorporated by General Joseph Seth, Colonel Oswald Tilghman, Mr. William A. Kirby, Mr. Walter Webster, and Mr. W. G. Quimby.

American Medicine, in its issue for March 31st, will announce that in April that journal will suspend publication as a weekly, and will thereafter appear only twelve times a year.

Mosquito Extermination in New Jersey.—The bill appropriating \$70,000 yearly for five years for the purpose of exterminating mosquitoes in the New Jersey marshes, which we noted in these columns recently, was passed on March 21st.

Charity Ball Earnings.—The Hospital of the University of Pennsylvania, the Howard Hospital, the Jefferson Medical College Hospital, and St. Timothy's Hospital, Roxborough, each received \$2,350 from the income of the annual charity ball.

Examinations for Assistant Medical Inspector.—The civil service examinations for positions of Assistant Medical Inspector in the Bureau of Health of Philadelphia, were held on March 14th. More than 100 candidates presented themselves for the examination, including two women. There are seven vacancies to be filled.

Philadelphia Emergency Corps Disbanded.—By the order of Director Potter, of the Department of Public Safety, the Philadelphia emergency corps, composed of physicians, has been disbanded. The corps was organized about ten years ago, for service during public demonstrations. It was composed of about thirty physicians, who worked under the chief of police surgeons.

State Board of Health Wins Test Case.—Dr. R. B. McKay, of the State Department of Health of Pennsylvania, entered the home of Mrs. John Treon, at Trevorton, Pa., under orders, to investigate a rumor that one of the inmates had diphtheria. He found the rumor to be correct and at once quarantined the house. Mrs. Treon brought suit against Dr. McKay for assault and battery. Justice Rhoads, before whom the case was argued, dismissed the case.

The Annual Meeting of the Association of American Medical Colleges was held in Pittsburgh, Pa., on March 19th. The following officers were elected for the ensuing

year: President, Dr. George M. Kober, Washington, D. C.; first vice-president, Dr. F. C. Waite, Cleveland; second vice-president, Dr. H. W. Loeb, St. Louis; members judicial council, Dr. E. H. Long, Buffalo; Dr. H. B. Ward, University of Nebraska; Dr. B. D. Meyers, Indiana University; and Dr. John Flint, University of California. Secretary Dr. Zapffe, of Chicago, was reelected.

Nurses Propose to Erect a Club House.—At a meeting of the alumnae association of the training school for nurses of the Episcopal Hospital on March 20th, the recently proposed plan to erect a building for the accommodation of trained nurses in private practice was discussed. Among the suggestions for incorporation into the plans, besides the 100 rooms, were a gymnasium, a reading room, a restaurant, etc. The graduate nurses from all hospitals of fifty or more beds, it is understood, will be eligible for registration at this, which will practically be a nurses' club.

Smallpox in Philadelphia.—On March 12th a case of smallpox was discovered at 745 Uber Street, Philadelphia, in the person of a negress who came to the city from the South on February 22nd. The patient was at once removed to the municipal hospital, the house was fumigated, and an energetic campaign of vaccination was begun in the neighborhood. This is the first case of smallpox to be reported since the week ending April 1, 1905. The cases under treatment at the Municipal Hospital were all discharged by the end of June, 1905, so that the city has been free from smallpox for about nine months.

Scientific Society Meetings in Philadelphia for the Week Ending April 7, 1906.—Monday, April 2nd, Philadelphia Academy of Surgery; Biological and Microscopical Section, Academy of Natural Sciences; West Philadelphia Medical Association; Northwestern Medical Society. Tuesday, April 3rd, Academy of Natural Sciences; Philadelphia Medical Examiners' Association. Wednesday, April 4th, College of Physicians; Association of Clinical Assistants of Wills Hospital. Thursday, April 5th, Obstetrical Society; Medical Society of the Southern Dispensary; Section Meeting, Franklin Institute. Friday, April 6th, American Philosophical Society.

The Annual Meeting of the Board of Trustees and the Staff of the Frankford Hospital was held recently. The announcement was made that an ambulance had been ordered by Mrs. Robert H. Foerderer. It is expected that an extension of the hospital buildings will be begun within the next six months. The following staff was elected for the ensuing year: Consulting surgeons, Dr. William Morrison and Dr. Charles Nassau; surgeons, Dr. Samuel Bolton and Dr. Charles Brady; medicine, Dr. Joseph Ball and Dr. Elmer E. Keiser; neurologist, Dr. George C. Hanna; gynecologist, Dr. John W. Wilkins; eye, Dr. Charles Stiles; ear, nose, and throat, Dr. Frank Walters; pathologist, Dr. William Good; assistants to the staff, Dr. Raleigh, Dr. Henry, and Dr. Hinchcliffe.

Philadelphia Personals.—Dr. Montgomery H. Biggs has resigned his position as chief resident physician of the Philadelphia General Hospital.

Dr. J. P. Crozer Griffith entertained on the evening of March 23rd, at his residence, 1810 Spruce Street.

Dr. Roland G. Curtin has been seriously ill, but is improving.

Dr. H. W. Wiley lectured at the Philadelphia College of Pharmacy on Tuesday, March 20th, on "The Use of Antiseptics in Food."

Dr. Henry W. Cattell entertained Hon. Champe S. Andrews at dinner on Monday, March 19th. The following guests were present: Mayor Weaver, Dr. Samuel G. Dixon, State commissioner of health; Dr. W. M. L. Coplin, director of health; Dr. Allen J. Smith, Professor Persifer Frazer, Dr. John B. Roberts, Thomas W. Barlow, Dr. Henry Beates, George W. Ochs, Dr. W. A. N. Dorland, J. Bertram Lippincott, Dr. W. Reynolds Wilson, Adolph Eicholz, Paschall H. Coggins, State Representative Daniel J. Shern, and John S. Cooper, of New York.

The Prevention of Pollution of the Delaware River.—The following communication was sent to the legislature of the State of New Jersey, on March 19th, by Governor Stokes: "A representative of the State sewerage commission, together with the Governor of this State, met the Governor of Pennsylvania, the State health commissioner, and other officials of the State recently in a conference, for the purpose of discussing preliminary arrangements for the prevention of the further pollution of the Delaware

River, and for remedying any pollution that may already exist. It was the sense of the conference that the States of New Jersey, Pennsylvania, and New York should take some joint action to this effect. With a view to that end, I suggest that the legislature authorize the State sewerage commission or its representative to meet the proper authorities of Pennsylvania and New York to devise legislation for this purpose to be presented at the next session. The importance of this subject is evidenced by the fact that the watershed of the Delaware drains 32 per cent. of the entire land area of the State, which has a population of 415,000, nearly one fifth of the entire population of the State."

The Health of Philadelphia.—During the week ending March 17, 1906, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases	Deaths
Smallpox	1	0
Cerebrospinal meningitis	6	2
Scarlatina	3	0
Diphtheria	1	0
Typhoid fever	1	0
Measles	16	0
Whooping cough	3	0
Scarlatina	21	25

The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 7; diarrhoea and enteritis, under two years of age, 32. The total deaths numbered 591, in an estimated population of 1,469,126, corresponding to an annual death rate of 20.92 in 1,000 population. The total infant mortality was 134; under one year of age, 94; between one and two years of age, 40. There were 31 still births, 18 males and 13 females. The temperatures were low and there was a snow storm on the 15th.

BOSTON AND NEW ENGLAND

A New Hospital Proposed at Greenfield, Mass.—The management of the Franklin County Hospital has under consideration plans for a new hospital. Several meetings, both of the board of managers and the hospital staff, have been held for the study and discussion of the plans.

The Doctors' Club of Greenfield, Mass.—At a meeting of the club held on Tuesday, March 20th, Dr. Henry B. Dunham, of the Massachusetts Sanitarium for Tuberculosis, at Rutland, who was the guest of the club, gave a talk on Sanitarium Methods and the Treatment of Tuberculosis.

The Franklin (Mass.) District Medical Society held a meeting at Greenfield, on Tuesday, March 13th, with the following programme: Three Important Eye Affections, by Dr. B. P. Croft, of Greenfield; The Medical Treatment of Pneumonia, by Dr. R. A. McGillicuddy, of Turner's Falls; The Complications and Treatment of Acute Rheumatism, by Dr. A. W. Atwood.

The Massachusetts General Hospital House Pupils' Alumni Association was organized at Boston, on Saturday, March 24th, and the following officers were elected: President, Dr. James C. White, of Boston; vice-presidents, Dr. Homer Gage, of Worcester; Dr. Thomas W. Huntington, of San Francisco; Dr. William S. Thayer, of Baltimore; secretary, Dr. Frederic A. Washburn, Jr., of Boston.

Bequests of the Late Dr. William T. Bacon, of Hartford, Conn.—By the will of Dr. Bacon, Yale University, the Hartford Medical Society, and the Hartford Hospital will have the bulk of his \$200,000 estate at the death of his widow. After making some small bequests, Dr. Bacon makes his entire estate into a trust fund for the benefit of Mrs. Bacon. At her death \$10,000 is to go to the Hartford Hospital, \$10,000 as a permanent fund for the Hartford Medical Society, and the residue is to be divided equally between Yale University and the Hartford Hospital.

A Proposed Open Air Tuberculosis Sanatorium for Portland, Maine.—A plan has been devised for an open air sanatorium for the treatment of tuberculosis as follows: It is proposed to take the detention hospital, located on the city home property, and by building open air pavilions at a very small cost, turn it into a sanatorium where the cases now in the city hospital could be treated, and at the same time furnish treatment to others at a very small cost. The de-

tention hospital consists of a main building and two wings, the whole having been moved from the old poor farm by Mayor Baxter. It is used only for the detention of suspected cases during smallpox outbreaks, and these come so infrequently that the house is in use but little. The board of health has estimated that the necessary changes could be made for \$600 and the sanatorium could be maintained at an expense of \$2,000 a year.

The Connecticut Valley Alumni Association of the medical department of the University of Vermont, held its second annual banquet at Springfield, Mass., on Thursday, March 22nd, about twenty-five being in attendance. The association is newly formed and its organization has not yet been perfected. But at a business meeting which followed the dinner a committee was appointed to do this. The officers elected at this meeting were: President, Dr. W. A. Smith; vice-president, Dr. J. C. Downey; secretary and treasurer, Dr. V. J. Irwin. The chief speaker of the evening was Dr. A. P. Grinnell, of New York city, formerly dean of the medical school. Other speakers were Dr. E. B. Nims, of Springfield; Dr. J. C. O'Brien, of Greenfield; Dr. H. D. Holton, of Brattleboro, Vt.; Dr. N. P. Wood, of Northfield; Dr. V. J. Irwin, of Springfield; and Dr. J. N. Fay, of Northampton.

The Mortality of Boston.—The number of deaths reported to the Board of Health for the week ending March 17, 1906, was 224, as against 233 the corresponding week last year, showing a decrease of 9 deaths, and making the death rate for the week 19.63. The number of cases and deaths from infectious diseases was as follows: Diphtheria, 35 cases, 2 deaths; scarlatina, 34 cases, no deaths; typhoid fever, 6 cases, no deaths; measles, 204 cases, 4 deaths; tuberculosis, 78 cases, 26 deaths; smallpox, no cases, no deaths. The deaths from pneumonia were 31, whooping cough none, heart disease 20, bronchitis 4, and marasmus 4. There were 14 deaths from violent causes. The number of children who died under one year of age was 37; under five years of age 59; persons over sixty years of age 56; deaths in public institutions 67.

The number of deaths reported to the board of health for the week ending March 24th, was 268, as against 209 the corresponding week last year, showing an increase of 59 deaths, and making the death rate for the week 23.48. The number of cases and deaths from infectious diseases was as follows: diphtheria, 53 cases, 3 deaths; scarlatina, 32 cases, no deaths; typhoid fever, 6 cases, no deaths; measles, 178 cases, 5 deaths; tuberculosis, 39 cases, 30 deaths; smallpox, no cases, no deaths. The deaths from pneumonia were 44, whooping cough 3, heart disease 28, bronchitis 13, marasmus 6. There were 19 deaths from violent causes. The number of children who died under one year of age was 49; under five years of age 77; persons over sixty years of age 64; deaths in public institutions 82.

BALTIMORE AND THE SOUTH

The Floyd County (Ga.) Medical Society.—The programme for a meeting held at Rome, on Saturday, March 24th, consisted of an open discussion on Influenza and the adoption of a fee bill.

The Richmond (Va.) Academy of Medicine and Surgery.—The programme for a meeting held on Tuesday, March 27th, included papers on Perverted Metabolism, with Special Reference to Liver Action, by Dr. Charles M. Hazen, and Some Facts About Bread, by Dr. W. Brownley Foster.

The License Tax on Physicians in Petersburg, Va.—A committee appointed by the Petersburg Medical Faculty, is to appear before the finance committee of the council and ask for the removal of the special license tax of \$25. As was stated recently in these columns, the profession of Richmond, Va., secured the removal of both city and State tax.

Smallpox in Virginia.—On account of the prevalence of smallpox in Richmond and in Petersburg, the secretary of the Manchester Board of Health has, by direction of the board, notified all manufacturing firms and employers of labor to see that all of their employees are promptly vaccinated.

The Petersburg (Va.) Medical Faculty.—At a meeting of the faculty held on the evening of Thursday, March 15th, Dr. R. A. Martin, Jr., of the health board, read a paper on Smallpox, and his experience in treating the disease. The

appearance of several new cases of smallpox has created much stir in the town, and vaccinations are being done on a large scale.

The Louisville (Ky.) Academy of Medicine.—At a meeting, held on Tuesday, March 7th, the election of officers resulted as follows: President, Dr. James T. Windell; vice-president, Dr. Donald R. Jacob; secretary, Dr. Oliver H. Kelsall; treasurer, Dr. Gavin Fulton. Dr. Lewis S. McMurry, president of the American Medical Association, was the guest of honor.

The Memorial Hospital Corporation, of Richmond, Va.—At a recent meeting of the members of the corporation, Dr. Lewis C. Boshier was elected president of the hospital to fill the vacancy caused by the resignation of Dr. George Ben Johnston, who has accepted a call from the medical college of the University of Virginia. Dr. John P. Davidson was elected vice-president, and Dr. Charles R. Robins secretary and treasurer.

The Louisville (Ky.) Medical and Surgical Society.—The programme for the annual meeting, held on Monday, March 26th, included the annual address by Dr. Charles A. L. Reed, of Cincinnati, whose subject was A Family Question in America. A banquet followed, at which Dr. Reed was the guest of honor. The officers of the society are: President, Dr. Charles W. Hibbitt; vice-president, Dr. Harry A. Davidson; secretary, Dr. John K. Morris; treasurer, Dr. Dunning S. Wilson.

The Practice of Medicine in Texas.—At a meeting of the Smith County Medical Society, held at Tyler, on Tuesday, March 13th, the bill to regulate the practice of medicine in Texas and the anatomical bill, as proposed by the State Medical Association, were considered. The former was approved with certain amendments suggested, and the latter stood approved in toto. The first bill provides for more stringent laws regulating the practice of medicine in Texas, stipulating that full college educations be necessary; that more rigid examinations be passed; that all people coming into the State asserting that they are doctors be examined before they are allowed to practice in Texas, etc. The anatomical bill permits Texas medical colleges to obtain dead bodies of paupers and unclaimed persons, it being alleged that under the present law Texas medical colleges can practically not procure bodies, which makes impossible the successful teaching of anatomy. After the adoption of these bills by the State Association, which meets at Fort Worth on April 26, the matter will be brought before the legislature.

The Mortality of Baltimore.—The number of deaths reported to the health department for the week ending March 17, 1906, was 225, as compared with 199 the corresponding week of last year, 215 in 1904 and 184 in 1903. The annual death rate in 1,000 population was: Whole, 19.85; white, 17.26; colored, 33.68. The principal causes of death were: Typhoid fever 2, scarlet fever 1, whooping cough 5, diphtheria 3, influenza (la grippe) 5, consumption 32, cancer 13, apoplexy 3, organic heart diseases 7, bronchitis 7, pneumonia 37, Bright's disease 18, congenital debility 8, lack of care 7, old age 6, suicides 2, accidents, &c., 14. The following number of cases of infectious diseases were reported, as compared with the corresponding week of last year:

	1905.	1906.
Scarlet fever	12	19
Diphtheria	1	1
Pseudomembranous croup	1	1
Scarlet fever	14	9
Typhoid fever	6	2
Measles	86	2
Mumps	1	1
Whooping cough	1	18
Chickenpox	1	12
Consumption	23	7

The sudden change in the weather during the week resulted in the report of many cases of bronchial affections, influenza, or "la grippe," predominating.

The report of the health department for the week ending March 24, showed a total of 231 deaths, as compared with 234 the corresponding week of last year, 236 in 1904, and 200 in 1903. The annual death rate in 1,000 of population was: Whole, 21.15; white, 18.81; colored, 33.68. The principal causes of death were:

Typhoid fever	1	Bronchitis	5
Scarlet fever	1	Pneumonia	39
Whooping cough	2	Bright's disease	19
Diphtheria	2	Congenital debility	8
Membranous croup	1	Lack of care	10
Influenza	7	Old age	7

Consumption	25	Smallpox	1
Scarlet fever	7	Whooping cough	1
Diphtheria	9	Measles	12
Measles	11		

The following number of cases of infectious diseases were reported, as compared with the corresponding week of last year:

	1905.	1906.		1905.	1906.
Scarlet fever	16	21	Whooping cough	1	8
Diphtheria	20	8	Measles	9	9
Measles	14	8			
Measles	91	8			

CHICAGO AND THE WEST.

The Chicago Neurological Society.—The programme for a meeting held on Thursday, March 29th, included the following titles: Presentation of cases, by Dr. L. Harrison Mettler, of (a) Spinal Amyotrophy with Papillary Inequality, and (b) Juvenile Myopathy; Presentation of a case of Unilateral Paralytic Chorea, by Dr. Grinker; cases of (a) The Leg Type of Progressive Muscular Atrophy, and (b) Syringomyelia, presented by Dr. Church; a case of Petit Mal, presenting Nystagmus exhibited by Dr. Hecht.

A Medical Fraternity Banquet.—A dinner to honorary members of Sigma of Alpha Kappa Kappa, the Greek letter fraternity of the medical department of the University of California, was held at the California Hotel, San Francisco, on Saturday, March 17th, and was attended by nearly 100 members and guests. Dr. A. J. Lartigau was toastmaster and the following programme of toasts was carried out: Hippocrates, Thomas Dodds; Our Alma Mater, Dr. G. E. Elbright; Relations of the Honorary to the Active Member, Dr. A. H. Glannini; Relations of the Older Graduate to the Embryo Doctor, Dr. C. G. Levison; The Clinical Teacher, Dr. C. M. Cooper; The Outlook for Young Graduates, Dr. C. D. McGettigan; Skin Games, Dr. Howard Marrow; The Hospital Interne, Dr. George Snyder; The Senior, Joseph Wrenn; The Junior, Lloyd Craig; The Sophomore, S. W. Cartwright; The Freshman, Harry Irwin.

Statement of Mortality in Chicago for the Week Ending March 24, 1906, compared with the preceding week and with the corresponding week of 1905. Death rates computed on United States Census Bureau's midyear populations—2,019,185 for 1906, 1,990,750 for 1905:

	Mar. 24, 1906.	Mar. 17, 1906.	Mar. 25, 1905.
Males	204	212	211
Females	228	243	259
Total	432	455	470
Under 5 years of age	37	36	38
Between 5 and 20 years of age	38	35	27
20 years and over	257	284	295
Total	332	355	360
Communicable diseases	14	18	12
Non-communicable diseases	25	38	37
Bronchitis	17	26	29
Cancer	19	21	27
Diphtheria	1	1	1
Measles	2	6	4
Scarlet fever	2	20	17
Smallpox	1	1	1
Suicide	3	2	1
Whooping cough	2	2	9
Total	11	67	72

The general health of the city is remarkably good—not only for the season of the year, but for any season. The mortality rate of the week is barely in excess of the average June rate. During the last thirty years the June rate has averaged 16.36 in a thousand. In the last decade it was only 13.01. The week's rate was 13.55, while the average March rate between 1876 and 1905 was 18.66 and for the last ten years it has been 16.04. The low pneumonia mortality is the principal cause of this low March rate. Since the first of the year there have been 1,222 deaths reported from this cause. During the corresponding period last year there were 1,427, or 205 more, deaths recorded from pneumonia, and the worst of the pneumonia season is practically over.

Pith of Current Literature.

AMERICAN MEDICINE.

March 22, 1906.

1. Some Personal Observations Made in Pennsylvania and in Texas Regarding Malarial Fever and the Anæmia of Malaria. By ALBERT WOLDERT.
2. A Man Having Ocular Movements Similar to those Found Normally in the Ungulates. By WILLIAM L. PHILLIPS.
3. The Recognition and Importance of Diagnosis in Incipient Pulmonary Tuberculosis. By J. H. ELLIOTT.
4. The Ætiology of the Hæmorrhagic Diathesis. By WILLIAM WESLEY CARTER.
5. Nose and Throat Diseases from a Constitutional Standpoint. By J. L. HARKNESS.
6. The "King's Evil" and Its "Cure" (*To be concluded*). By JOHN KNOTT.

4. **The Ætiology of the Hæmorrhagic Diathesis.**—This subject, says Carter, may be conveniently treated from two ætiological points of view: (1) In a broader sense as an acquired transient condition; and (2) from a more restricted view, as a hereditary, habitual affection, commonly known as hæmophilia. His definition of the acquired hæmorrhagic diathesis is that it is a temporary tendency to bleed, and is usually developed secondary to some disease or condition in which there is a marked disturbance in the physiological relations between the blood and the walls of the vessels. Clinically it is this form of the dyscrasia which we most frequently meet. He classifies it as follows: 1. Infectious diseases and toxic conditions as ætiologic factors, such as malaria. 2. Cachectic conditions. 3. Purpura hæmorrhagica. 4. Hæmophilia. A transient hæmorrhagic condition is sometimes developed in the severe types of the acute infectious diseases, as in variola, measles, typhus fever, infectious diseases of the newborn, etc. Here it is symptomatic and is due to the chemical action of the toxins on the walls of the vessel and to their poorly nourished condition. The hæmorrhages are petechial in character and can scarcely be considered more than indicative of a very intense degree of infection. In hæmophilia the predisposing element is heredity; the proportion of males to females affected is about thirteen to one; the Anglo-German and the Jewish races seem to be predisposed to it, and some authors thought that it is due to the greater frequency of consanguineous marriages among these people. But the opinions as to the ætiology of hæmophilia differ widely.

THE BOSTON MEDICAL AND SURGICAL JOURNAL

March 22, 1906.

1. Some Cases Illustrating Cystoscopic Diagnosis. By ARTHUR L. CHUTE.
2. Cerebral Seizures with Suboccipital Pain. Miliary Cerebral and Gross Vertebral Aneurysms. By W. D. PRESTON and E. E. SOUTHARD.
3. Gunshot Wounds of the Head and Spine. By WALTER R. WEISER.

1. **Some Cases Illustrating Cystoscopic Diagnosis.**—Chute reports seven cases in which he used cystoscopy as an adjuvant to diagnosis. In none he used a general anæsthetic, and in all the cystoscopic examination added very definitely to the knowledge that had been obtained by other methods of study. He thinks that in cases of painless hæmaturia of renal origin, cystoscopy is of particular value, allowing one to tell definitely which kidney the bleeding is from before the other localizing symptoms, pain, tenderness, and increased size, have appeared. The great value of this early localization in cases of malignant disease is self evident.

2. **Cerebral Seizures with Suboccipital Pain: Miliary Cerebral and Gross Vertebral Aneurysms.**—Preston and Southard say that aneurysms of the vertebral arteries,

like those of the other cerebral arteries, are rarely made out in life and are usually discovered by physicians in cases of sudden death. They describe a case which occurred under their observation, and which they classify as irritative. It is probable, they say, that the striking attacks of suboccipital pain were brought on by a combination of factors, through pressure of the vertebral aneurysms, aided by heightened intracranial pressure attending the cerebral hæmorrhages. The chronic alterations of the cord and posterior root areas were no more marked than the chronic alterations above and below the region of the vertebral aneurysms; yet it is possible that the spinal gliosis found may be related in some way with the attacks.

3. **Gunshot Wounds of the Head and Spine.**—Weiser describes five cases of gunshot wounds of head and spine. In one, the bullets were located, but it seemed unwise to attempt their removal because of the peculiar position of the important one. The bullets had entered the mouth, and the fact that this wound was continuous with the opening through the vertebra and that the bone damage in the body of the vertebra was in this peculiar location, made the reporter unwilling to interfere. In another case, although the bullet was shown by skiagraphs to be lying in the cerebellum and at first caused pronounced symptoms, the bullet was not interfered with. The patient is now perfectly well and illustrates the fact that a bullet wound in the brain substance may cause no serious trouble after the result of the first laceration is over. In a third case no attempt was made to remove the bullets, one having entered the tip of the nose and fracturing one of the transverse processes of the cervical vertebra, while the other completely severed the optic nerve, until eight weeks after the injury. This patient at the time of the accident was pregnant in the third month. She was delivered at term of a healthy child and is now perfectly well. In the last case the bullet entered the brain where it did considerable damage to the substance; the bullet was not removed and the patient is improving.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 24, 1906.

1. The Formation of Uric Acid (*To be continued*). By LAFAYETTE B. MENDEL.
2. Eye Strain as a Cause of Diseases of the Digestive Organs. By GEORGE M. GOULD.
3. The Diagnosis of Renal Calculus. By GUY L. HUNNER.
4. A Case of Traumatic Endocarditis. By A. HERZFELD.
5. Results of Faciohypoglossal Anastomosis for Facial Palsy. By ALFRED S. TAYLOR and L. PIERCE CLARK.
6. A Clinical Study of Mixed Infection in Tuberculosis, Preliminary Report. By M. POTTENGER and CHARLES C. BROWNING.
7. Autolysis (*Concluded*). By P. A. LEVENE.
8. An Examination of the Stools of One Hundred Healthy Individuals, with Especial Reference to the Presence of Entamæba Coli. By EDWARD B. VEDDER.
9. A Case of Right Subclavian Attempted Endoaneurysmorrhaphy (Mates). Case Following Simultaneous Ligation of Common Carotid and First Portion of Subclavian. By HOWARD LILIENTHAL.

3. **The Diagnosis of Renal Calculus.**—Hunner says that few diseases present more protean symptoms and simulate so varied an array of other maladies as stone in the kidney. The smallest stone may cause typical agonizing symptoms not easily mistaken even by the patient, while without attracting notice large stones may occupy both kidneys, causing insidious destruction of these organs and sudden death from anuria. The more common kidney diseases to be thought of in the diagnosis are: (1) Tuberculosis. The only positive diagnosis is the finding of tubercle bacilli in the urine or the producing tuberculosis in guinea pigs by the inoculation of the urine or the diseased tissues taken

from the bladder. (2) Pyelitis, Pyelonephritis, Pyonephrosis. It may be impossible, except at operation, to diagnosticate any one of these conditions from an infected nephrolithiasis. (3) Tumors. It is by no means easy to differentiate between stone in the kidney and a tumor. Here, again, the chief dependence is in the examination of the urine. (4) Intermittent Hydronephrosis. A movable kidney, in which the conditions favor the sudden kinking of the ureter, may give rise to attacks which very closely simulate renal colic due to stone, but the return of the kidney to its normal size and position is accompanied by relief of pain and increase in the amount of urine. Among the diseases of neighboring organs the authors mention: (1) Gallstones. The urine will show blood if the stone is in the kidney and bile if there happens to be obstruction in the common duct. (2) Appendicitis. Here, again, the urine is the safest guide. (3) Intestinal obstruction. Occasionally an attack of renal or ureteral stone colic causes a reflex paralysis of the bowel. (4) Pancreas stone colic. Again the examination of the urine is to be relied upon; blood with kidney stone, sugar in pancreatic cases. (5) Henoch's purpura and angeioneurotic oedema may lead to a diagnosis of renal colic caused by stone. The history of seven cases are given.

5. Results of Faciohypoglossal Anastomosis for Facial Palsy.—Taylor and Clark report seven cases, three of which were previously described in the *Medical Record*, of faciohypoglossal anastomosis. They favor the method of later rather than end to end anastomosis. Mortality was absent in their seven cases and shock was very slight, each case healing by primary union, the scar being small and not very noticeable. The interval of time which should be permitted to elapse between the onset of the paralysis and the operation is the subject of wide diversity of opinion among authors. The paralyzed muscles should be kept in the best possible condition by means of massage, electricity, etc., in order that returning nerve power may find good muscles to work on.

6. A Clinical Study of Mixed Infection in Tuberculosis.—Pottenger and Browning experimented with streptolytic serum in ten tuberculous patients, who showed active streptococci in the sputum. The results of their investigations show that streptococci are found in lung tissue beyond the areas of necrosis, and can be present without causing any acute symptoms, such as high fever, chills, etc. The products of the tubercle bacillus are capable of producing symptoms very near, if not identical with those so called mixed infections, and it is possible that these are sometimes due to the one cause, sometimes to the other, and perhaps at times to both working together. The streptococcus plays, without question, a part, at least in some causes of so called mixed infection in tuberculosis. The streptolytic serum has at least some specific action on the streptococcus as witnessed in the reduction of fever and abatement of symptoms. It also plays some part in the general pathology of the tuberculous process of chronic cases without marked symptoms, as is shown by the altered character of the sputum. Where no acute symptoms were present the serum seemed to exert a favorable influence on the course of the disease, sufficiently often to suggest that the presence of the streptococcus affects the tuberculous process unfavorably, even in many cases where it causes no active symptoms. Mixed infection is a factor to be recognized and dealt with, before the advent of threatening symptoms, the same as tuberculosis is diagnosticated and treated before the advent of consumption.

8. An Examination of the Stools of One Hundred Healthy Individuals, with Especial Reference to the Presence of Entamoeba Coli.—Vedder examined the stools of one hundred soldiers, to determine the pres-

ence of entamoeba coli. The soldiers were natives of the Philippine Islands, belonging to the constabulary and scouts, or white men of the hospital corps, or from the Twentieth United States Infantry Regiment. The author found that entamoeba coli is by far the most common parasite present in the Philippines, having been found in fifty per cent. of the American and seventy per cent. of the natives. In the whites the next most common parasite was the cercomanas intestinalis (twenty-four per cent.), in the natives the ankylostomum duodenale (sixty-four per cent.). These results tend to strengthen the position previously taken by Schaudinn, Craig, and other authors, that the entamoeba coli does not produce dysentery. No diagnosis of amebic dysentery should be made by the microscopist unless he has found the entamoeba dysenteria as distinguished from the entamoeba coli. The wide dissemination of intestinal parasites among the natives is, no doubt, facilitated by the universal custom of the Moros, who are Mohammedans, of defecation in the river, and the fact that, excepting the few Americans living in that locality of the Philippines, it is also a universal custom to drink this river water unboiled. Out of fifty natives examined only in two there were no parasite of any kind found, while out of the same number of Americans twenty-one had no intestinal parasites.

9. A Case of Right Subclavian Aneurysm. Attempted Endoaneurysmorrhaphy (Matas).—Lilienthal describes an operation, performed by him in which he attempted to perform Matas's operation, but failed because the collateral circulation into the axillary supplied the blood which filled the aneurysm after the subclavian and the carotid had been tied. The operation was then carried out successfully by employing the older method of proximal ligation. The author thinks that Matas's principles have decided advantages.

MEDICAL RECORD

March 24, 1906.

1. The Modern Treatment of Fractures, By CARL BECK.
2. The Uterus and Ovary of Neurasthenia.
By ROBERT L. DICKINSON.
3. Appendicitis. A Study of a Series of One Hundred and Forty-seven Appendectomies, By A. E. ISAACS.
4. Filtration of Public Water Supplies,
By CARSON E. GILLETTE.
5. Public Water Filtration in Massachusetts.
By CHARLES HARRINGTON.

1. The Modern Treatment of Fractures.—Beck states that the Röntgen method, in combination with the usual methods of examination, determines the character of a suspected bone injury. If there be no bone injury, the proper treatment consists in massage followed by immobilization, a movable splint being preferable for the latter purpose. But if there is a fissure or fracture, followed by no displacement, manipulations of the injured area must be avoided and immobilization in the most comfortable position applied. As a rule a plaster of Paris dressing answers the purpose best. After two or three weeks it must be removed and massage begun. In about two weeks a splint of plaster of Paris is applied, which the patient can take off and reapply. In case of displacement, reduction must be tried at once. This can be done either under the control of the fluoroscope on a translucent table, a plaster of Paris dressing being applied after reposition is perfect. This is a simple, short, and cheap method. A more tedious, but a safer way, is to reduce the displacement under the guidance of a skiagraph taken before. This will indicate in which direction the efforts at reduction must be made and how far. After a plaster of Paris dressing, padded with cotton layers at its end only, is applied, the skiagraph is taken through it, to ascertain whether reposition was complete; if not, reposition has to be done over again. If necessary, an anæsthetic should be employed. In those cases in

which, on account of entangling of the fragments, extensive splinter formation, or similar complications, reposition, even under anaesthesia, cannot be accomplished, the fragments must be exposed by the scalpel and brought into apposition. If there be no tendency to displacement, a plaster of Paris dressing will insure immobilization. But if the fragments slip out easily it is safer to unite them with catgut, provided there is enough periosteum to be utilized for that purpose. Otherwise it is best, especially if large bones come into consideration, to keep them together with a bronze wire suture. The sooner this is done, the better it will be, because the smaller are the changes taking place in the soft tissue.

2. **The Uterus and Ovary of Neurasthenia.**—Dickinson observed over one hundred cases of chronic and aggravated type of neurasthenia. The associated lesions in cases of this degree and their frequency would be as follows: (1) In the ovary, chronic oophoritis, chiefly microscopic, was found in nearly all; (2) in the uterus, endometritis, usually cervical, was present in the majority of cases, and was seldom accompanied with thickening; (3) a high degree of sclerosis of the vessels of the uterine walls, and of those of the endometrium was sometimes discovered in cases of long standing, and the venous enlargements were many; (4) about the vulva, certain hypertrophies were noted in two thirds of the cases; (5) in the bladder, congestion of the trigone was frequent; (6) in the rectum, catarrh, congestion, and atony were persistent in a large number. In this class of cases pelvic symptoms are prominent and lumbar pain constant, and in almost all of the cases pelvic disorder is coincident, not causative. Correction of moderate abnormalities of structure and function by prolonged local treatment or by operation lessens pelvic pain very little and betters the general condition not at all. Treatment should be directed entirely to the general condition: For dysmenorrhœa, bromides with hydrastinin (and helonin); for the menorrhagia, ergot, stypticin; for rectal mucous catarrh, irrigation with astringents and cure of constipation; for bladder irritation, water freely, and urotopin. Besides, training in outdoor life with development of the muscular system, ridding the patient of mental worry or strain, and proper feeding. Operation on pronounced pelvic lesions is warrantable in a few selected cases, such as persistent and exhausting hæmorrhages, larger tumors, etc.

3. **Appendicitis.**—Isaacs records his personal observations in a series of one hundred and forty-seven appendectomies. His statistics show that thirty-three per cent. of those coming for operation were recurrent cases, but the author thinks the proportion is really much higher. Sixty-four patients were below twenty years of age, and eighty-three were above, while eighty-nine were males and fifty-eight females. The symptoms were pain (one hundred and twenty-seven); constipation (one hundred and three) while diarrhœa is rather exceptional (six); vomiting (one hundred); dysuria (twenty-two), chills (forty-six). Interesting are his remarks on temperature and pulse; his series indicates that while the temperature is likely to be higher in a case with pus than in a clear case, and still higher in a diffuse peritonitis, no reliance can be placed on temperature by itself in any individual case as an indication of the local condition. The same is to be said of the pulse; general unreliability by itself. Leucocyte count, like temperature and pulse, in itself gives no positive indication of the presence or absence of pus, yet it may be of value as confirmatory evidence in the presence of other symptoms. The author gives a description of his method of operation.

4. **Filtration of Public Water Supplies.**—Cassius E. Gillette, major of engineers, United States Army, is of the opinion that it would be well for every municipal-

ity, drawing its water supply from streams or lakes, to inaugurate small testing plants to determine the best way of purifying its water supply, even if such purification on a large scale is not contemplated in the immediate future. No source, subject to inflow surface water is safe unless measures be taken to remove the dangerous bacteria before using the water. Nature has supplied three methods: Quiescence for a long time to permit the germs to die or to settle to the bottom; flow for long distances in streams bearing sand or silt; and the process of soaking into the ground, reappearing as springs or artesian wells, which are usually of good water. Artificial means of purifying large surface water supplies have generally been made in imitation of the first and the third of these natural processes. But the expense of operation becomes sometimes very great. Systems of mechanical filtration in which the mud of the muddy waters is first coagulated by alum, or some equivalent, and then strained the bacteria by forcing the water rapidly through a sand strainer, are used. Which is the best plan is in the present state of knowledge a matter of experiment for any special water.

BRITISH MEDICAL JOURNAL.

March 10, 1906.

1. The Midwifery of the Present Day, By P. HORROCKS.
2. The Necessity for Immediate Diagnosis in Cases of Uterine Cancer, By T. WILSON.
3. Enucleation of Fibromyoma of Uterus During Pregnancy, By J. STEWART.
4. Occipitoposterior Presentation, By G. GEDDES.
5. Ophthalmology: Past and Present, By S. SNELL.
6. On Rhythmical Variations in Cerebrospinal Pressure, By E. G. KENSINGTON and F. EKE.
7. A Case of Atrophy of the Phalanges of the Hands with Joint Lesions Sequential to Multiple Tumors of the Skin, By B. WATSON.
8. Deformity of the Lower Limbs, By E. F. G. TUCKER.

1. **Obstetrics.**—Horrocks states that the fewer examinations during labor, the less the risk of infection. It is little short of criminal to terminate normal labors as quickly as possible by the use of forceps or manual interference. It may be true that with all metal, boiled, aseptic forceps, with aseptic hands and parturient parts, a child may be delivered without setting up sepsis. But unless there is good reason, it is quite unjustifiable. There is no such thing as a painless labor, and no known method of rendering it painless without injury. Chloroform and morphine retard or stop the uterine contractions. Do not follow down the uterus with the hand during the delivery of the child. Again, it is best not to interfere with the perinæum. The child's head will distend it, and eventually there will be in primiparæ a slight tearing of the posterior fourchette and of the perinæum. But in the majority of cases such tearing will not require a stitch. Notching of the cervix at the os externum may be looked on as normal. Do not tie the cord until five minutes after respiration commences, as this gives the child more blood. After delivery, if the mother's pulse is normal and the visible hæmorrhage is not excessive, there is no necessity for grasping the uterus to see if it is contracted, or to knead it. The management of the third stage of labor is of great importance. Any form of traction on the umbilical cord is most harmful, as it causes post partum hæmorrhage. Crédé's method is much better, but Nature's method is the best. The patient if left alone, lies quiet for a period averaging thirty to forty minutes, perhaps even going to sleep. Then uterine pains begin, and the placenta is driven out. During the interval beneficial changes take place, the circulation of foetal blood through the placenta ceasing, and the flow of maternal blood through the sinuses becoming checked. Again there is better and more complete contraction and retraction of the uterus, and a minimum risk of excessive hæmorrhage.

2. Early Diagnosis of Uterine Cancer.—Wilson states that a considerable proportion of cases of cancer of the uterus can be cured by operation if the disease is recognized sufficiently early. But such early diagnosis is rarely made. The first direct symptom in most cases consists in small, irregular bleedings from the uterus, in the discharge of serum, clear or bloody, sometimes in considerable quantity, in increased loss at the regular periods or a feeling of weight or uneasiness in the pelvis, lower abdomen, or sacral region. Not rarely pruritus of the vulva may be the first, and for some time the only symptom. A more striking symptom consists in distinct bleeding after straining at defecation or after coitus. In fact, any bleeding or discharge from the uterus after the menopause should be considered to indicate the presence of uterine cancer until the contrary is proved. In a single woman it is allowable to wait a fortnight; in all other cases examination should be made within two or three days, and if cancer is observed and is still operable, its removal should be carried out within ten days of the patient's first seeking advice. The diagnosis of the disease depends upon its two great manifestations, new growth and ulceration. The most characteristic physical signs of a cancerous nodule or tumor, are its hard inelastic consistence, and its irregular and uneven shape. When ulceration has occurred, the diagnosis is easier, and depends upon (a) hardness of the base; (b) friability of the surface; and (c) bleeding. If definite pieces of the growth are brought away visible to the naked eye, the disease must be looked on as cancerous until the contrary is proved by the microscope. In cancer of the vaginal part of the cervix diagnosis is easiest; any prominence above the surface or any depression is suspicious.

4. Occipitoposterior Presentation.—Geddes states that the following signs and symptoms are frequently associated with occipitoposterior presentations: 1. A history of pains occurring a longer or shorter period before birth, at irregular intervals, and associated with more or less slight dilatation of the os. 2. When the position of the fontanelles can be recognized, diagnosis is easy. 3. Premature rupture of the membranes. 4. Parchment os, the cervix feels like a sheet of note paper, especially posteriorly. The anterior lip is pendulous. 5. A sensation of emptiness in the hollow of the sacrum, due to the arrest of the head near the promontory of the sacrum. 6. Recognition of the position of the ear is of great aid in diagnosis. The best thing to do is to allow Nature a long time in which to rotate the head. Attempts at rotation by forceps usually fail. Pressing upon the front of the head during a pain is a safe procedure and sometimes accelerates rotation. Think twice before using forceps.

LANCET.

March 10, 1906.

1. Phlebitis and Thrombosis. *Hunterian Lectures I and II*, By W. HOWARD.
2. Epidemic Disease in England. The Evidence of Variability and Persistency of Type (*Milroy Lectures, II*), By W. H. HAMER.
3. *Spirochæta Pallida* (*Spironema Pallidum*) in Syphilis. By T. SHERMAN.
4. The *Spirochætæ* Found in Syphilitic Lesions, By G. M. O. RICHARDS and L. HUNT.
5. Observations on the Animal Reactions of the *Spirochætæ* of the African Tick Fever, By A. BURNETT and A. KINGDON.
6. The Presence of the *Spirochætæ Pallida* in Syphilitic Lesions, By L. S. DUDGEON.
7. A Problem in Diagnosis, By C. A. MERCIER.
8. Hippocrates and the Newly Discovered Health Temple of Cos, By R. CATON.

1. Phlebitis and Thrombosis.—Howard, in his first two Hunterian lectures, discusses phlebitis and thrombosis as follows: First as regards clotting. Healthy

(plasma) which holds in solution a proteid material (fibrinogen); in this fluid are suspended the red corpuscles, the various colorless corpuscles, and the blood platelets; if the normal relations between the blood and the vessels are disturbed coagulation may occur; and this involves the appearance in the blood (probably from changes in the colorless corpuscles and platelets) of a nucleoproteid which with a soluble salt of calcium forms fibrin ferment, and this acting upon the fibrinogen of the plasma leads to the formation of fibrin which with the entangled corpuscles forms the clot. The blood platelets are now held to be independent elements of the blood, and to have an important influence in the process of coagulation. The first stage in the formation of a thrombus is the accumulation and viscous change of the blood platelets which adhere to each other and to the wall of the containing vessel; to these are soon added numerous leucocytes; fibrin ferment is set free and fibrin appears, entangling the red corpuscles. Retardation of the blood stream favors the process, while in the powerful current of the large arteries near the heart small quantities of clot are easily swept away and a thrombus less easily formed. But simple retardation or arrest of the blood current is not alone sufficient to cause thrombosis. Thrombosis is thus usually due to a combination of conditions. Lesions and degenerations of the vessel walls, impaired nutrition of the endothelium, retardation of the blood current, changes in the composition of the blood and in the proportion of its formed elements, the invasion of microorganisms, all may play a part. If a thrombus is formed from stagnant blood the clot is red, and is spoken of as a red thrombus; if it is formed from blood in motion, it is usually of a gray color—the white thrombus. The softening which occurs at the centre of these thrombi is due to the liquefaction of the blood platelets. The hyaline thrombus is found chiefly in capillaries and small bloodvessels, and is associated chiefly with infective diseases. Arterial thrombosis is met with in connection with wounds, injuries, and degenerations of the arterial walls. It may occur gradually as in aneurysms, or suddenly as a result of embolism or other mechanical obstruction. It is also caused by acute or chronic arteritis, anæmia, and wasting diseases. It has also been observed in connection with various acute diseases, especially influenza, enteric fever, typhus, and pneumonia. Venous thrombosis. The conditions of coagulation in the veins are very much the same as for the arteries, but it is more common in the veins. The most serious conditions are those of septic origin; phlegmasia alba dolens is an example of septic phlebitis extending from the uterine veins through the iliac to the femoral and other veins. Thrombosis is a common occurrence in varicose veins, and is usually the result of injury. Gouty phlebitis is a well recognized disease, and the condition is frequently met with in typhoid fever. There is a special liability to thrombosis in chlorosis, depending probably upon the condition of the blood. Peripheral thrombosis is also a well recognized complication of appendicitis.

4. Spirochætæ of Syphilis.—Richards and Hunt divide the spirilla found in syphilitic lesions into the following varieties: (1) Straight or slightly bent rods in large numbers; (2) undulating organisms, showing an attempt to coil; (3) long, delicate, wavy, spiral organisms of great length similar to the spirochæta Obermeieri; (4) organisms similar to the last, but finer; and (5) the spirochæta pallida. The first three forms are the same organism at different stages of its existence, the spirochæta refringens. The fourth variety seems to be an intermediate stage between refringens and pallida. All these forms were found in the primary lesion. The best examples of spirochæta pallida are

obtained from the shotty inguinal glands of the early secondary stage by puncture with a hypodermic needle under strict antiseptic precautions. All attempts to grow the organism on culture media have failed. The authors hold that *spirochæta pallida* is the real specific organism of syphilis; that the organisms termed *spirochæta refringens* are polymorphic forms of the same organism; that the *spirochæta pallida* tends to be limited to the deeper parts and to the internal organs; that the *spirochæta refringens* exists only on the surface where the disease is manifested by external lesions. It is possible that the *spirochæta pallida* circulates freely in the blood and that as it develops it becomes *spirochæta refringens*, that this larger organism forms emboli in the capillary circulation and at the site of these emboli the external lesions of the disease are produced, and the organism undergoes farther development for the spread of the disease.

5. African Tick Fever.—Breini and Kinghorn have been able to infect with the *spirochæta* of African tick fever monkeys, horses, dogs, rabbits, guinea pigs, rats, and mice. All the small animals succumbed to the infection. They conclude that the *spirochæta* of African tick fever differs from the *spirochæta Obermeieri*, the animal reactions being different.

LYON MEDICAL.

March 4, 1906.

1. Mortality from Typhoid Fever in Hospital Practice, By F. BARJON.
2. Paralysis of the External Rectus of Otic Origin, By M. LANNOIS and A. SERRETIÈRE.

1. Mortality from Typhoid Fever in Hospital Practice.—Barjon considers statistically the mortality from typhoid fever as taken from the records of certain French hospitals grouped together so as to fairly represent the mortality in hospital practice. He deals with the mortality during three distinct periods, first, the period prior to the use of cold baths (1865-1869), second, that of the introduction of Brand's method, which he calls the crusade of cold baths (1880-1888), and, third, the present time represented by the years 1894 to 1900, in which the details of the treatment have become changed from those advocated by Brand. During the first period the mortality was 26.16 per cent., during the second it fell to between 7 and 8 per cent., and during the third it rose to 14.39 per cent. The writer is inclined to attribute the increase in mortality during the third period to the changes which have been adopted in the details of the administration of the cold baths.

PRESSE MEDICALE.

February 28, 1906.

1. Senility. Arteriosclerosis, By A. LETIENNE.
2. Complications of Ovarian Fibromata, By O. GUELLIOT.
3. Bier's Method in Hydrarthroses, By RENÉ DE GAULEJAC.
4. Gonorrhœal Rheumatism and Antigonococcic Serum, By R. ROMME.

1. Senility.—Letienne claims that all the harmful effects of senility are counterbalanced when the organism is normal, so that the organs maintain the integrity of their structure and function. But as the result of obscure causes the organic reaction may be faulty, or certain organs may be affected in preference to others, the morbid effect may concentrate itself on the arterial system and localize itself at certain places. The heart or the kidney, with generally slight arterial lesions, may be the more affected, or the brain may be affected in preference to the other organs. In this way the diversity of the manifestations of senility may be explained, each case presents its own individuality.

2. Complications of Ovarian Fibromata.—Guelliot reports three cases of removal of ovarian fibromata in which these growths had produced serious symptoms that demanded immediate relief through the involve-

ment of neighboring structures. The differentiation of this condition may be difficult at times because it may resemble that of an acute salpingitis, a tubal hæmorrhage, a rupture of an extrauterine pregnancy, or an appendicitis.

3. Bier's Method in Hydrarthroses.—De Gaulejac advocates the use of passive hyperæmia obtained by venous constriction above the lesion, the method of Bier, and states that it has produced good results in various forms of arthritis, particularly in cases of post-traumatic hydrarthroses.

4. Gonorrhœal Rheumatism and Antigonococcic Serum.—Romme reviews the results obtained by Rogers as they were published in the *Journal of the American Medical Association*, 1906, No. 4, page 263.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

February 18, 1906.

1. Contribution to the Treatment of the Anæmia of Ankylostomiasis, By ANTONIO BERTI.
2. Some Observations on Diphtheria, By AMEDEO GASPARINI.
3. A Case of Diffuse Purulent Peritonitis Due to Gangrenous Appendicitis, By MARIO SERGE.
4. Intrapulmonary Injections of Bacteriolysin in the Treatment of Tuberculosis, By SPIRO LIVIERATO.

1. Anæmia of Ankylostomiasis Treated with Serum.—Berti describes his experience with a serum prepared by immunizing a sheep with the serum of a patient ill with ankylostomiasis in an advanced stage. The antibodies generated thus in the sheep were assumed to be beneficial in the treatment of other cases of miner's anæmia. Three cases were observed by the author in which the serum was given experimentally, but only a moderate degree of improvement was secured. The author thinks, however, that better methods of manufacturing the serum would give more pronounced benefit in the treatment.

3. Gangrenous Appendicitis Treated with Peritoneal Lavage.—In a case of peritonitis due to gangrenous appendicitis Serge employed copious irrigations of the peritoneal cavity. After opening the abdomen and finding the appendix almost destroyed, an ulcerated surface remaining on the cæcum, the peritonæum was cleansed in the usual way and the cavity irrigated with twelve litres of salt solution. Counterdrainage was established through Douglas's pouch by means of a stout rubber drain, and a second drainage tube was placed so that it drained the upper part of the peritoneal cavity. The cæcum was sutured to the anterior abdominal wall near the wound, and the remainder of the wound was sutured. Irrigations were practised at frequent intervals during the first few days after the operation through the rubber tubes. The irrigations had a marked effect on the patient's pulse, in each instance lowering the pulse rate considerably, the patient recovering.

4. Injections of Bacteriolysin Into the Lungs in Tuberculosis.—Livierato, at Maragliano's suggestions, tried the effect of local injections of tuberculous bacteriolysin into lesions in the lungs. The bacteriolysin thus used was prepared by treating animals with the aqueous extract of living tubercle bacilli. The regions for these injections were the infrascapular and the interscapular, corresponding to the site of the lesions, and the technics was practically the same as that employed for exploratory puncture. The injections had a markedly beneficial effect on the general condition of the patient.

March 4, 1906.

1. The Influence of Tuberculin on Experimental Infections, By C. P. GOGGIA.
2. Late Occurrence of Umbilicovesical Fistula, Due to the Persistence of the Urachus, By GIUSEPPE SERAFINI.
3. Rare Case of Erectile Cavernous Subglottic Angioma, By ALESSANDRO GIRARDI.

4. The Treatment of Varices in the Legs by Tying the Popliteal Vein, By CARLO VISCONTINI.
5. Primary Syphiloma of the Rectum, By LANZAFAME.
6. A Case of Mycosis Fungoides, By I. ULMANN.
7. Septicemic Infection Due to the Bacillus Capsulatus, By MICHAELANGELO VIVALDI.

1. Influence of Tuberculosis Upon Other Infections.

Goggia presents an interesting study of the question as to the cause underlying the lessened resistance met with in persons with tuberculosis who are attacked by a secondary germ. The author found that when a drop of tuberculin was added to a culture medium it had no appreciable effect on the growth of the microorganism. But when considerable quantities of tuberculin were added to the culture medium it was found that the development of germs, such as the bacillus coli, the typhoid bacillus, etc., was greatly favored. Experiments further showed that animals which had been subjected for a time to artificial intoxication with tuberculin succumbed more readily to infections such as those with colon bacillus, the streptococcus, the staphylococcus, etc.

4. **Treatment of Varicose Veins by Ligating the Popliteal Vein.**—Viscontini describes Parona's method of ligating the popliteal vein as a means of treating varicose veins in the legs. The incision is made vertically in the upper part of the popliteal space. The internal popliteal nerve is drawn aside without any undue traction upon it, and at the bottom of the space the popliteal vessels are exposed. The vein is very carefully detached from the artery, and is ligated above and below a point at which it is severed, if possible. The aponeurosis and the skin are then sutured, leaving a drain of gauze packing. The leg is immobilized in a gutter splint and is slightly elevated. Parona reported twenty-two cases of varicose veins successfully treated by this comparatively simple operation. Viscontini now reports two additional cases in which the operation was followed by equally satisfactory results.

5. **Primary Lesion in the Rectum.**—Lanzafame reports this case, in a tramp aged nineteen years, who first complained of bloody stools, followed a month later by pains in the joints and the appearance of condylomata about the anus and the scrotal base. On examination his anus was found easily dilatable without any resistance from the sphincter, and a primary lesion was discovered on the mucosa of the lower part of the rectum. The mode of infection had evidently been that usually met with in such cases.

RIFORMA MEDICA
February 21, 1906.

1. New Researches on the Thyreoid and Parathyreoid Mechanisms, By GUSTAVO LUSENA.
2. Contribution to the Causes of Acute Articular Rheumatism, By GIUSEPPE VOLPE.
3. Contribution to the Physiopathology of the Great Omentum, By ALDO CERNEZZI.

2. The Ætiology of Acute Articular Rheumatism.

Volpe examined systematically, by means of cultures, the articular fluid and the blood of patients in whom the diagnosis of acute articular rheumatism could be made without any doubt. He studied six cases in this manner, and in his conclusions sums up the theories of the ætiology of acute articular rheumatism as follows: Four hypotheses are at present held as to the cause of this disease: (1) That it is due to a special bacillus, the bacillus of Achalmé; (2) that it is due to a specific micrococcus (the micrococcus rheumaticus); (3) that it is due to the streptococcus pyogenes or the staphylococcus pyogenes; and (4) that it is due to a germ still undiscovered. The results of the bacteriological examinations conducted by Volpe were negative in all the six cases, and he concluded that the ætiological factor of acute articular rheumatism was still undiscovered. He believes that this germ belongs to the

class of ultramicroscopic structures, and that time will show the truth of this hypothesis.

3. **Physiopathology of the Omentum.**—Cernezzi's experimental study concerns itself with the action of the omentum upon the absorption of a kidney totally isolated from the circulation. He found that the kidney, which is completely isolated from the circulation of the blood by ligatures, rapidly becomes necrotic and the animals (rabbits) die rapidly as the result of the absorption into the system of the products of decomposition of the organ. This does not occur, however, when the great omentum acts as an intermediary and absorbs the products mentioned as they are generated. The absorption of these toxic substances depends upon the formation of adhesions about the kidney by the epiploon, and takes place most favorably when these adhesions are extensive. This absorption goes on, however, independently of the presence of the capsule of the kidney. The process of absorption goes on in virtue of the formation of new vessels between the omentum and the adherent kidney, and while necrosis goes on in the kidney, which is isolated by ligature, the renal tissue finally becomes in large part calcified and incoercuous.

ROUSSKY VRATCH

January 28, 1906.

1. An Apparatus for the Simultaneous Dissection of a Number of Microscopical Sections. The Use of this Apparatus for Staining and Fixing Microscopical Objects (Embryos, Ovaries, etc.), By N. P. TISCHUTKINE.

2. Immunization Against Dysentery, By B. E. KLINE.
3. The Rôle of Thermophile Bacteria in the Human Intestine, By N. N. ANITCHKOFF.
4. Some Contrasts Between Facts and their Interpretation, By SERGE GROUSDIEFF.

1. **Method of Preparing a Number of Microscopical Sections at Once.**—Tischutkine describes a simple apparatus which enables the histologist to transfer a large number of sections simultaneously from one solution to another, and to carry the entire lot of sections together through each step of the complicated staining methods. The apparatus is simple, yet requires a lengthy description, and can best be understood by a glance at the illustrations. A still simpler method, however, is given by the author in this article, and is worth describing here. It consists in a modification of Unna's funnel method of staining sections. A moderately sized funnel of glass is lined with filter paper; a few small openings are made in the paper with a needle. The sections to be stained are placed in the funnel, and the first dye is poured into the funnel. A rubber tube provided with a pinch cock such as is used on burettes is attached to the outlet of the funnel so that the length of time during which the dye acts can be accurately controlled, while a specimen section can be removed from the funnel from time to time, and examined to see whether the dye has done its work properly. The stop cock can then be opened, the dye filtered back into a bottle, and the next dye, if there are more than one to be used, can be poured on, closing the cock once more. If it is desirable or needful to wash the sections after the first dye has been used, the washing fluid can be poured into the funnel until the fluid comes free of dye from the tube, and then the sections can be removed and the filter paper changed to a clean one. In this way, not only is the entire process greatly simplified, but also a great deal of dye and other material is saved.

2. **Immunization Against Dysentery.**—Kline, of Wyssokovitch's laboratory in Kieff, presents a very complete experimental study of the question of immunization against dysentery. He tested the immunizing, agglutinating, and antitoxic powers of antidyenteric serums prepared in horses and goats. The toxine for these injections was obtained by a method recently de-

scribed in a thesis by Rosenthal (*Deutsche medizinische Wochenschrift*, 1904, No. 7), who materially simplified the preparation of the specific toxine of dysentery for immunization. The author found that the practical results of immunization with the toxine of Rosenthal were superior to those obtained with immunization by culture exclusively as practised by Shiga and Kruse, as well as superior to the method of immunizing by means of infusions of the bacterial bodies, as practised by the author himself.

3. **Thermophile Germs in the Human Intestine.**—Anitchkoff tested the methods used in isolating thermophile germs in the intestine, first described by Miquel in 1881, and later by Globig (1888), Rabinovitch (1895), and Tsiklinski (1902). He examined the fæces of a normal adult from which he planted cultures upon neutral or alkaline bouillon prepared from meat extract. He concluded from a large series of observations that thermophile bacteria occur in fæces in but very small numbers, and that they do not develop any marked biological activity in the human intestine, so that their presence is not of great consequence.

ANNALS OF GYNÆCOLOGY AND PÆD ATRY.

February, 1906.

1. Forceps, Version, and Craniotomy,
By G. L. BRODHEAD.
2. Constitutional Low Arterial Tension in Children,
By L. F. BISHOP.

1. **Forceps, Version, and Craniotomy.**—Brodhead thinks the forceps operation has saved more lives than any other. Its indications are found when the head is at or below the brim of the pelvis, in the absence of pelvic deformity or such complications as prolapse of the cord or placenta prævia, the natural forces being insufficient, or when for any reason the life of mother or child is threatened. When the forceps is applied above the brim there are always both difficulty and danger. The author does not wait more than an hour and a half after the completion of the first stage of labor before applying the forceps, and prefers the forceps with solid blades. He favors rotation with forceps in occipitoposterior positions. Version is cephalic, pelvic, or podalic, and may be external, internal, or combined according to the indications. Rupture of the uterus is the chief danger, especially when the extraction is made rapidly through a partially dilated cervix. Craniotomy is advised where the forceps has failed and the child is dead, and is easier and safer than podalic version. It is less dangerous in careful hands than a protracted forceps operation or a difficult version.

2. **Constitutional Low Arterial Tension in Children.**—Bishop admits that congestion and anæmia are influential in disease and occasion the onset of many diseases, but acting alone they are not so important as has been supposed. The effect of acute congestion differs from that of the chronic and both differ in their effect in different individuals. Low arterial tension without cardiac, or renal symptoms, is constitutional with some children, the blood circulating too easily. Active exercise and brief hot baths are beneficial in such cases. With suitable regimen the condition will improve and perhaps disappear after adolescence.

THE PRACTITIONER.

February, 1906.

1. The Normal Daily Temperature Variation and Its Modifications in Pulmonary Tuberculosis,
By J. I. GALBRAITH.
2. Sterilization of the Hands,
By R. A. STONEY.
3. On Foreign Bodies in the Uterus,
By J. B. HELLIER.
4. The Food Factor in the Paroxysmal Neuroses,
By F. HARE.
5. Chorea Gravidarum. A Short Monograph, with Details of Two Recent Cases,
By J. S. SHEILL.

6. Some Aspects of Pelvic Appendicitis,
By G. G. TURNER.
7. The Tissue Metabolism of Phthisis Pulmonalis, Albumosuria, and the Thoracic Indices of Phthisis,
By A. S. PARRINSON.
8. Some Recent Reports Concerning Endotheliomata and Peritheliomata,
By A. CARLESS.
9. Case of Fibroid Tumor of the Vagina,
By G. F. B. SIMPSON.
10. Treatment of Acute Intussusception,
By T. GUTHRIE.

1. **The Normal Daily Temperature Variation and Its Modifications in Pulmonary Tuberculosis.**—Galbraith recalls the fact that variation in the normal temperature aims to balance heat production and heat dissipation. The balance is preserved by the nervous mechanism which acts chiefly by influencing heat dissipation. The muscular and glandular systems also have much to do with variations in temperature, as their functions are disturbed. A series of experiments upon monkeys showed that both physiological and pathological gastrointestinal metabolism can sustain a raised mean temperature in tuberculosis. Tuberculin has no action upon temperature, by itself, but it sets up changes which do produce such an effect. Temperature perturbation is rarely a feature of pure tuberculosis, but the tubercle toxine produces a condition of the heat centres which favors the development of hectic. The treatment of the morbid condition must depend on the successful analysis of the various factors at work. Antipyretics are not recommended. The hectic is not incompatible with increase in weight and amelioration of symptoms.

2. **Sterilization of the Hands.**—Stoney believes it is possible to render the hands free from pathogenic bacteria by a simple and short method. It consists in washing in hot water and then soaking them in an antiseptic fluid, and requires less than ten minutes. Wearing gloves during an aseptic operation is not necessary, though it is advisable if the skin is difficult to sterilize, or is injured by the constant use of antiseptics. The author advises those who propose to practise surgery to experiment upon themselves and determine the proper steps to secure sterile hands. For post mortem work and dressings in which septic material is encountered gloves are imperative.

3. **On Foreign Bodies in the Uterus.**—Hellier classifies such bodies according to the reason for introduction as follows: 1. About half are introduced to secure abortion. 2. Next in frequency are those which are used primarily for therapeutical purposes, including leeches, pessaries, and tampons. 3. Self abuse. 4. Attempts to prevent conception. 5. The vagaries of the hysterical or insane. 6. Accidents of various kinds. 7. Worms of different varieties. 8. Objects of value introduced for concealment. The diagnosis is easy or difficult, according to circumstances, the prognosis is least favorable in pregnancy. The treatment is obvious. The use of stem pessaries is deemed utterly inadvisable.

4. **The Food Factor in the Paroxysmal Neuroses.**—Hare concludes provisionally that hyperpyræmia, or excess of imperfectly oxidized carbonaceous material in the blood, is a common humoral factor in some cases of the special pathological variations of vasomotor action which constitute migraine, asthma, and epilepsy, and that the paroxysms of these diseases may be regarded as conservative, if not salutary, reactions to disperse this condition. While these paroxysms are not to be regarded as decarbonizing functions, they may properly be regarded as pathological acarbonizing functions.

5. **Chorea Gravidarum.**—Sheill reports two cases of this rare disease, the pathology of which is still unknown, though it is more likely to occur in those who have experienced chorea during adolescence. The disease usually begins with the third or fourth month of

pregnancy and persists until the end of pregnancy, or the movements may continue the patient become maniacal, and death result from exhaustion. Treatment may include rest, bromides, arsenic, salol, sedatives, and in bad cases the induction of labor. The sooner and more rapidly the latter is performed the better. The disease may result fatally even if the uterus is promptly evacuated.

7. The Tissue Metabolism of Phthisis.—Parkinson feels justified in making the following statements concerning cases of phthisis pulmonalis: 1. The respiratory capacity is diminished below the normal. 2. It is diminished per centimetre of stature of the individual. 3. The carbon dioxide exhaled per kilogramme of the body weight is increased above the normal. 4. The total of oxygen consumed per minute by the tissues per kilogramme of body weight is increased. 5. The total purin nitrogen excreted is increased; in other words, tissue metabolism is increased. 6. Albumose in the urine shows an infective condition. If it is absent there is probably no ulceration or breaking down of lung tissue.

8. Reports Concerning Endotheliomata.—Carless refers to recent teaching that the endothelial cell is the most important factor in repair. The numberless round cells which collect when reparative activity is needed are largely due to overgrowth of endothelial elements. Proliferative activity of a useful type if prolonged may cause activity which will result in tumor formation, or endotheliomata. The histological manifestations of these tumors vary. The commonest sites for their development are the skin, testis, throat, parotid, and submaxillary glands, the neighborhood of the mouth and cheeks, the long bones, and the so called carotid gland.

10. The Treatment of Acute Intussusception.—Guthrie thinks there is no form of abdominal lesion in which a successful issue is so dependent upon early treatment. In cases which are left to Nature ninety-eight per cent. die from general peritonitis, from toxæmia due to fæcal obstruction, or from exhaustion. Reduction may be practised by retrograde distention, or inflation, with or without external manipulation. Air, water, or hot milk may be used for the purpose; success is sometimes possible, but failure will prejudice further treatment, and it is practically sure to occur in thirty-four per cent. of cases. Abdominal section at an early period is the method of election, the incision being median unless the indication is clearly in another locality. Reduction is effected by gently squeezing the intussusciptions and not by traction on the entering layer. If gangrene has occurred resection must be as extensive as may ensure sound tissue.

REVUE DE CHIRURGIE.

LE DÉCEMBRE, 1905.

1. Note Concerning an Anomaly of the Fingers, Especially a Deviation of the Little Finger, By C. FÉRÉ.
2. The Rational Treatment of Congenital Luxation of the Hip. By P. LE DAMANY.
3. Abscesses of the Liver in the (French) Colonies, By E. LOISON.
4. Osteoperiosteal Lipomata, By S. SCHWARTZ and G. CHEVRIER.
5. Peptic Ulcer of the Jejunum Following Gastroenterostomy, By A. GOSSET.
6. Intermittent Dropsy of the Gallbladder with Obliteration of the Cystic Duct, By E. VILLARD and G. GOTTE.

1. Note Concerning an Anomaly of the Fingers, Especially a Deviation of the Little Finger.—Féré has frequently noticed that the development of the little and ring fingers was arrested. Atrophy of the little finger is frequently associated with a lateral deviation of the terminal phalanx toward the ring finger, or the terminal phalanx may be permanently flexed, the entire finger being rotated.

2. Congenital Luxations of the Hip.—Le Damany

the threefold condition required of any satisfactory method of treating this condition. The operation should be done during the first eighteen months of life if the diagnosis is positive. Radiography will furnish all necessary data to establish a diagnosis. Reduction should be forcible after the third year, less forcible in earlier periods. The method of Paci-Lorenz is recommended. Reduction should be preceded by traction of the thigh and flexion of the thigh upon the leg. Fixation is retained by the plaster cast and walking is commenced in two to ten days. In two or three months the head of the bone will be fixed in the cotyloid cavity. Then follows correction of the position of the limb by means of a protective covering of elastic material, a plaster corset, and a proper apparatus for producing torsion of the limb. This period varies from six to eighteen months. If the luxation is bilateral, time may be saved by treating both limbs simultaneously, but there will be more pain than when they are treated separately. The alternatives to this method of treatment in the exceptional cases are reduction through an incision, and the method by osteotomy.

3. Abscess of the Liver.—Loison found by a bacteriological study of the pus from hepatic abscess that microbes were frequently absent. Occasionally he found a diplococcus, staphylococcus, streptococcus, colon bacillus, and pyogenic bacillus. In abscesses which were without microbes it was believed that they had disappeared. He concluded that suppurative hepatitis was of several varieties, like the enteritis which caused it. The clinical course and the prognosis depend upon the degree of virulence of the microbe and the conditions which concern the culture medium. He recommends exploratory puncture, and moderate bleeding from the liver, the latter to lower the temperature and relieve the pain when pus is not found. Radioscopy has been found useful in determining the diagnosis of this condition. Four groups of cases are considered, those which occur in the tropics, those which occur in France, those which follow suppurative appendicitis, and those which are due to echinococcus infection.

4. Osteoperiosteal Lipomata.—Schwartz and Chevrier recommend the following treatment: The method of choice is extirpation. If the lipoma is slow in its development there may be a question as to the necessity, since the tumor is of a benign nature. The indications for removal are its size and the occasional disturbances of function which it causes. Extirpation should not be delayed in lipomata which develop rapidly or in unfavorable locations, or in very young children. If removal is not complete the portion retained may grow and result in recurrence of the mass. The pedicle should be entirely removed from the periosteum. It may also be necessary to extract a portion of periosteum, or an exostosis if that is the point of origin. Other troubles of the bones in the vicinity of the tumor must be treated on their merits.

6. Dropsy of the Gallbladder.—Villard and Gotte find as a result of their pathological and clinical investigation that the radical cure of this condition can be brought about only by surgical measures. Intermittent dropsy in connection with biliary lithiasis is first considered. This offers the choice of three operations, cholecystostomy, cholecystenlysis, or cholecystectomy. Intermittent dropsy which is caused by obstruction in the cystic duct is then considered. Various processes have been recommended for fixing the prolapsed liver by complete or incomplete transfixion. A complementary operation will usually be required upon the gallbladder, and if there is suspicion that it contains calculi these must, of course, be removed. The gallblad-

der should then be attached to the abdominal wall to secure permanent relief to the duct obstruction.

REVUE DE MEDECINE.

February, 1906.

1. Contribution to the Study of the Nitrogenous Changes which Occur in the Tuberculous,
By H. LABBÉ and G. VITRY.
2. Experimental Investigations on the Influence of Salt Upon Work,
By C. FÉRÉ.
3. Diagnosis of Tuberculosis,
By M. MÉRIEUX.
4. New Method of Treating Spasmodic Paraplegia by Exercise,
By M. FAURE.
5. Puerperal Eclampsia,
By P. J. DE BRUINE PLOOS VAN AMSTEL.

1. **Nitrogenous Changes in the Tuberculous.**—Labbé and Vitry have drawn from their investigations the following conclusions: 1. The study of the nitrogenous changes in the tuberculous including that which goes into the body and that which goes out enables one to determine the metabolic factors in such cases. 2. At the second and third periods of the disease the non-utilized nitrogen is more abundant than in the normal condition, even when the food ingested is less in quantity. 3. This statement is susceptible of variation, hence in a given case one must rather regard the digestive capacity and the power of assimilation than the weight of the individual. 4. In the authors cases the nitrogen in the urine remained constant, though varying in different individuals. It is necessary to find this factor and determine therefrom the quantity of nitrogenous food which the patient can assimilate. 5. The balance of metabolized nitrogen has been established by combining the nitrogen in the feces and the expectoration at a time when the nitrogen of the food ingested was small in volume. 6. Sugar in doses of one hundred grammes daily increased the assimilation of nitrogen, and increased the nitrogen in the urine.

2. **The Influence of Salt Upon Work.**—Féré found that salt acted as a condiment to increase motor activity for a short time. He thought it probable that it had a similar action upon certain other functions. The stimulation of activity is followed by a corresponding depression which requires its compensatory rest. Its action upon nutrition is analogous to that upon motor activity, and in this respect it resembles the action of condiments in general. Whether any of these substances favor digestion and absorption is as yet undecided. Salt does not enable men to work without fatigue any more than other stimulants. The rule is a general one that the more effective the excitant at the beginning, the more profound will be the subsequent fatigue.

3. **Diagnosis of Tuberculosis.**—Mérieux finds the following results from his investigations: 1. That the blood serum obtained from a tuberculous person, also the fluid derived from vesication, contains toxic products which resemble tuberculin. The two are not identical, and he suggests for the former the term *tuberculous reactionary products*. Inasmuch as vesication has been found to be beneficial in the rheumatism which occurs in the tuberculous, it was believed that the benefit was due to the elimination by means of the vesicles of these reactionary products. 2. That these reactionary products when injected into a guinea pig which has been inoculated with tuberculous material from three to six weeks produce a specific reaction, indicated by either a rise or a fall in the temperature, of one or two degrees. 3. That this specific reaction determines the diagnosis of tuberculosis.

4. **New Method of Treating Spasmodic Paraplegia by Exercise.**—Faure tried his method upon forty cases of spasmodic paraplegia, in which there was permanent contracture of the lower limbs, with more or less suppression of voluntary motion. The method of treatment consisted: 1. In a primary period of passive move-

ments to relieve the contractures even though they may be intense and of long standing. 2. In a period of voluntary movements, regulated by the condition of paralysis or paresis of each group of muscles. The treatment was continued at intervals for periods lasting from one to four years, and in all but four of the cases a very considerable degree of improvement was obtained. In several of the cases normal motion was restored.

JOURNAL OF MENTAL SCIENCE.

January, 1906.

1. Amentia and Dementia: A Clinicopathological Study (Continued),
By JOSEPH SHAW BALTON.
2. On Some Relations Between Aphasia and Mental Disease,
By SYDNEY J. COLE.
3. Some Notes on the Study of Insanity,
By F. GRAHAM CROOKSHANK.
4. Multiple Lipomata in General Paralysis,
By CONOLLY NORMAN.
5. Some Clinical Notes Upon Urine Testing and Results,
By ROBERT JONES.
6. A Note on Psychiatric Terminology and Classification,
By THOMAS DRAPES.
7. The David Lewis Manchester Epileptic Colony,
By ALAN MCDUGAL.
8. Notes Upon the Incidence of Tuberculosis in Asylums,
By GEORGE GREENE.
9. The Necessity for State Interference on Behalf of the Imbecile,
By F. E. RAINSFORD.
10. The Employment of Female Nurses in the Care of Insane Men in Asylums (To be continued),
By GEORGE M. ROBERTSON.

3. **Some Notes on the Study of Insanity.**—Crookshank says that in an empirical sense we have to recognize that insanity is more a condition or state of mind, a sum of series of psychical phenomena. It embraces therefore a physical state, a series of physical conditions, the signs of which differ, not in Nature, but in arrangement and relation from those physical signs of disease which are not usually understood to indicate any part of what is commonly called insanity. But it is a necessity in studying insanity to consider the psychical and physical series separately, without verbal confoundings and transmutations. In respect of the psychical series we have to study not merely the kinds of conscious states occurring, but the order in which they occur. It is only when we study the physical series that we are justified in considering the ætiology and treatment of insanity. In particular, we have to study what the author defines as the physical signs of insanity. It may be stated that insanity, as a state of mind, is one in which there is substitution of simple, organized, undifferentiated, and incoordinated states of consciousness for complex, unorganized, differential, coordinated states of consciousness, tending to progress towards annihilation; liable to arrest or reversal, and, while similar to that which occurs in senility, anæsthesia, delirium, and intoxication, differing in circumstances of time, regularity, symmetry, and uniformity, and in the ætiology of the correlated physical processes.

6. **A Note on Psychiatric Terminology and Classification.**—Drapes calls the attention to the bewildering definitions and classifications used by the authorities on insanity. Many abortive attempts have been made to evolve a classification of insanity which shall obtain general acceptance, but the fact is, that there has been such a signal failure in constructing a satisfactory working basis for the study of that condition. This is indicative of one or two things: either that our information on the subject is so imperfect that the data requisite for a proper scientific classification are wanting, or that there is such an essential difference between insanity and all other departments of knowledge, that the construction of a system of classification on the usual broad principles which obtain in the case of all other branches of science is impracticable. The author

then takes up such words as dementia, hallucination, illusion, using their usage and definition as examples and suggests that any classification of insanity which may ultimately be adopted should be preceded by definitions of those terms upon which there is general agreement amongst psychologists, leaving those of doubtful meaning to take care of themselves, until a stage of greater preciseness and accuracy in terminology is reached.

7. The David Lewis Manchester Epileptic Colony.—McDougall describes the daily routine adapted at the epileptic colony, with the housework to be done by the inmates, males, females, and children. The children receive instructions from the school teachers provided for them, they also assist in housework and in working in the garden. But there are also times for recreation, and the inmates have learned to play as well as to work. The colony has been only in existence for about two years, and there has been a diminution in the frequency of attacks, and in a much greater measure, a remarkable improvement in the mental and general condition of the colonists.

8. Notes Upon the Incidence of Tuberculosis in Asylums.—Greene states that the mortality from tuberculosis in English asylums for the insane is but little, if any, greater than that amongst the general population. According to Osler phthisis is directly responsible for one seventh of all the deaths. At the Claybury Asylum, in 1902, there were 207 deaths, of which pulmonary tuberculosis accounted thirty-three. The general report of the commissioner on insanity shows that out of 3,994 female deaths in asylums 597 were due to phthisis, whereas out of 4,369 male deaths only 582 were due to this disease, or approximately 15 females to 13 males. But this may be explained by the fact that in males general paralysis accounts for one quarter of all deaths, phthisis being relatively uncommon in these.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN GENITOURINARY SURGERY.

Meeting of January 17, 1906.

Dr. RAMON GUITERAS, in the chair.

Nephrectomy for Tuberculous Kidney.—Dr. FOLLEN CABOT presented this patient and specimen. What few symptoms the patient presented related to the bladder. The bladder was healthy, with the exception of some thickening and reddening around the right ureteral orifice. Cystoscopy was painless, which was unusual in tuberculous cases. It showed the opposite kidney to be normal. The diseased kidney was removed through a lumbar incision, and it was found to be absolutely disorganized and to contain a stone. The operation, which was performed at the Postgraduate Hospital in November, 1905, was rather difficult, as the kidney seemed to extend up under the eighth rib and was firmly adherent to the diaphragm. An additional cut was made along the border of the last rib to give more room. A tight stricture of the ureter on the diseased side was encountered within an inch of the bladder. Dr. Cabot had found a similar condition in several cases of tuberculosis of the kidney. Two months after the operation the patient had gained twenty-five pounds in weight, and had passed clear urine since the operation.

Six Cases of Stone in the Urinary Tract.—Dr. F. TILDEN BROWN presented these patients, and drew attention to the following points: The fairly common experience of renal and ureteral stones failing to give any of the classical signs and symptoms, while, on the other hand, all the evidences are more directly refer-

able to disorders of the nervous system, intestinal tract, especially the appendix, gallbladder, and ducts, the female genital organs, and the muscles of the trunk and lower extremities. It is not essential to the presence of stone in the kidney or ureter to have elements such as blood, pus, or mucus in the urine. This statement is irrespective of those cases where a calculus causes complete obstruction of one ureter. Absence of the elements mentioned in the urine passed voluntarily would, of course, make ureteral catheterism useless, except in cases of obstruction, where it would be of great value in proving unilateral anuria. More commonly than not a lodged ureteral stone does not interfere materially with the passage of urine about it. Furthermore, it has frequently surprised us to note with what ease a ureteral catheter will pass quite a large stone so lodged in the ureter. Consequently, this means of diagnosis, i. e., lack of opposition to the advance of a catheter, is of little value. The value of a radiograph of the introduced stiletted ureteral catheter in cases of questionable shadows in the region of the lower ureteral segments is very great. Even this test might be fallacious in a case of stone sacculated at some distance from the ureteral lumen. The fact must be recognized that in cases of pure uric acid stones a negative radiograph is as apt as not to be returned, and this, too, in subjects of favorable proportions and where the intestinal contents are thoroughly removed. The value of an x ray plate in teaching the physiological or morbid anatomy of renal calculus in some cases is sometimes considerable, quite apart from the diagnostic importance attaching to such radiographs in the majority of such cases. The frequent difficulty in finding a stone in the kidney at operations comes after a series of radiographs have all defined its position as constant in relationship to fixed bony parts. The advantage of removing a pelvic stone, especially when not branched into the calices, by way of a vertical slit through the posterior wall of the renal pelvis, rather than through any part of the renal cortex. The advantage of doing an immediate nephrectomy rather than nephrolithotomy in cases of large branched stones or where a single wedged stone has brought about a destructive pyonephrosis. The frequency of a moderate rise in temperature with renal colic, and at times an elevation of four degrees and more. The great difficulty in some unusual cases, even with the present means for diagnostic precision, of at once distinguishing renal diseases.

A Case of Ureteral Calculus and a Case of Calculus Pylonephritis.—Dr. ALBERT A. BERG presented these cases. He said they were shown to emphasize the importance of the appearances of the ureteral orifices in the diagnosis of renal and ureteral affections. The first patient, a young woman, had had attacks of right sided renal colic for a number of years, radiating to the thigh and genitals. She was admitted into the hospital with a good deal of pain always present, but more severe in acute attacks. A radiograph was made, but the picture included only the kidney and the upper end of the ureter, and the report was negative. Cystoscopy revealed the appearance of the ureteral orifice that was typical of a stone impacted in the lower end of the ureter. The lips of the right ureteral orifice were edematous, pouting, and everted. The left orifice was perfectly normal. The left ureteral catheter passed easily, but the right stopped at 2 cm. from the bladder. There were no signs of vesical tuberculosis, no tubercle bacilli in the urine, or tubercles around the orifice of the ureter, and as there was no history of gonorrhoea, no inflammation in the bladder, and no sign of a tumor in the pelvis which would give rise to a stricture of the ureter, he made the diagnosis of impacted stone in the ureter. Dr. Gerster opened the bladder suprapubically, dilated the ureteral opening, and extracted a stone of the size of a split pea from the ureter. Pri-

mary closure of the bladder was effected, and a catheter *à demeure* inserted. The patient was discharged from the hospital in a few weeks, the bladder wound healing primarily.

The second patient had been treated a long time for chronic nephritis. Dr. Wohlbarst, whose patient he was, found pyuria, and in searching for the cause found a large vesical calculus. The patient came under Dr. Berg's care last summer. A suprapubic incision was made, under cocaine anæsthesia, and a stone of the size of a peach removed. The pyuria continued and failed to improve under bladder washings. Cystoscopy showed the bladder to be normal, except that the trigonum was slightly congested. The right ureteral orifice was normal and discharged clear urine. The left orifice was considerably dilated, the lips were slightly swollen, there was no ulceration, and it was discharging pure pus. The diagnosis was that of pyonephrosis of the left kidney, nontuberculous in character because of the absence of tuberculous ulcerations around the ureteral opening, and secretory death of the left kidney, as indicated by the solid pus efflux. There were no tubercle bacilli in the urine. Nephrectomy was advised. The patient suffered from frequency of urination and discomfort. The urine from the right kidney was normal, and the urea percentage in the urine of the right kidney and the cryoscopic index of the blood and urine were normal. Lumbar nephrectomy was performed in October, 1905. On account of the patient's peculiar stature (he was a hunchback), nephrectomy was very difficult, and it was necessary to resect the two lower ribs. A tumor of about the size of the patient's head was removed, and was found to be full of stones. Since then he had passed clear urine, had gained in weight, and his general health had improved.

Dr. E. BLASUCCI asked why Dr. Berg had not used suprapubic drainage instead of primary closure of the bladder.

Dr. A. ERNEST GALLANT asked what the experience of the members of the section had been in finding stones outside of the ureter. He said he had had a case of this kind last year. The patient complained of pain and soreness near the umbilicus. He opened the abdomen and found a ureteral calculus behind the peritonæum, buried in the mesentery two inches from the ureter. There was no sign of a perforation of the ureter. It was a typical ureteral calculus.

The CHAIRMAN said this was something he had never heard of. In two cases of perinephritic abscess he had seen a stone projecting from the kidney. In another case he had found a stone outside of the kidney in the postrenal space.

Dr. BERG said the reason for doing primary suture of the bladder was that the bladder was perfectly healthy. The line of suture was protected by a catheter *à demeure*. In cases of infection of the bladder or of cystitis he invariably drained the bladder.

Torsion of the Spermatic Cord.—Dr. MARTIN WARE presented two specimens. The first was a testicle removed from a boy sixteen years of age. It had never descended. The patient was suddenly attacked with severe abdominal pain, nausea, vomiting, and collapse. When he rallied the pain was still confined to the right testis. On his admission to the service of Dr. Goldenberg at the Mt. Sinai Hospital, there was fever with a swelling in the right inguinal region. The swelling occupied the inguinal canal, and was tender and elastic. On account of the previously undescended testis, the diagnosis of torsion of the spermatic cord suggested itself, and this diagnosis was verified on operation. The cord was twisted once and a half, and the testis was displaced in a horizontal direction. Dr. Ware said these cases of torsion of the cord were quite rare. Some years ago, however, Dr. Scudder, of Boston, had collected some forty cases, in the larger number of

which the testis had to be sacrificed at the operation. Two or three years ago Dr. Vander Poel had presented before the section a case which did not come to operation, in which he succeeded in untwisting the cord by manipulation, and thereby relieved the symptoms from which the patient was suffering.

Contracted Bladder.—The other specimen presented by Dr. Ware was a very much contracted bladder. The patient was admitted to the service of Dr. Goldenberg at Mt. Sinai Hospital during the summer. Six weeks prior to admission he had suffered from painful and frequent urination. He had been perfectly well before that. There was no blood in the urine and no fever. He had to urinate every few minutes both day and night. The bladder would not hold even an ounce of urine, and it was impossible to use the cystoscope. A bacteriological examination of the urine showed a pure culture of *Proteus vulgaris*, but no tubercle bacilli. Examination of the prostate was negative. The testes were normal. The patient was given an injection of tuberculin, and responded to a marked degree, with a temperature of 106°, which led the surgeon to suspect tuberculosis somewhere in the genitourinary tract. Irrigation of the bladder was continued for three or four weeks, but without improvement. There was no previous history of renal colic. An x ray examination was negative. A suprapubic incision was made, and revealed nothing at all about the bladder, except that the organ was very small. Cystotomy afforded temporary relief. The patient died four or five days later, however, with symptoms of sepsis. The post mortem showed the bladder to be very small and contracted, holding an ounce and a half, and marked hæmorrhages into it. On one side there was a small, contracted, hydronephrotic kidney, and on the other the kidney was very large, full of pus, and wholly disorganized, and from it there was obtained a pure culture of *Proteus vulgaris*. There was a stone in either ureter near the bladder.

Dr. F. BIERHOFF said that he had seen cases of torsion of the cord, but not the complete torsion with gangrene. He had found this condition a number of times recently, as an accompaniment of acute inflammatory conditions of the epididymis. He had seen several cases in the last few months in which the testis had rotated from ninety to one hundred and eighty degrees.

Dr. WARE said that the only history in the case of torsion of the cord was that the patient knew the testis was not in the scrotum, although it would occasionally descend part of the way. There had been no injury to precipitate the torsion. There was no pain whatever prior to the sudden onset. There was no hernia accompanying the undescended testis. The question might be raised as to what Dr. Bierhoff understood by torsion of the spermatic cord. He did not consider the cases mentioned by Dr. Bierhoff to be cases of actual torsion, as the only cases reported were those in which there were actual twists of the cord, with infarction of the testis. He thought the slight displacement of the testis accompanying gonorrhœal epididymitis was quite common, and the weight of the testis alone in these cases would account for a slight twisting.

The common explanation of contracted bladder found in literature was the statement that the condition was synonymous with tuberculosis. A contracted bladder coming on rather acutely was, in the greater number of instances, of tuberculous origin. In this case there were no evidences of tuberculosis elsewhere in the body. He knew of no other instance where a proteus infection had responded to tuberculin.

Prostatectomy Complicated by Vesical Calculus.—The case was reported by Dr. EUGENE FULLER. It was that of a man, seventy-three years of age, who was very feeble and had suffered with great tenesmus. The

prostate was not extremely large, and the calculus on examination appeared to be of about the size of a chestnut. The prostate was removed through the perinaeum, but the stone was removed through a suprapubic incision in preference to using any force in extracting it through the perinaeum and bruising the perineal tissues. He believed it would have been fatal to pull the stone out through the perinaeum, and crushing the stone would have necessitated more delay than the suprapubic incision.

Hæmaturia from a Vesical Tuberculous Lesion.—Dr. FULLER also presented the case of a woman of twenty-two who had come complaining of profuse hæmaturia. She had been absolutely well until after the birth of her first child, eight months previously. While nursing the child she began to have paroxysms of pain in the right loin, and later frequency of urination. Her bladder was washed, but her trouble increased. Blood appeared in the urine. When Dr. Fuller first saw her the urine was bright red with blood, there were frequency and distress in urination, with tenderness over the right kidney and on palpation over the bladder. No tubercle bacilli could be found in the urine. Cystoscopy showed a large ulcer around the right ureteral orifice and another in the fundus. The tuberculosis was probably renal in origin. He did not think there was a chance for surgical treatment in this case, owing to the multiplicity of the urinary lesions. The patient was improving under general treatment, but he thought the outlook was rather bad.

Dr. BIERHOFF, referring to Dr. Fuller's second case, said that from the cystoscopic appearance he thought it was not a case of primary vesical tuberculosis, but of cystitis secondary to renal tuberculosis. The question came up in this case as to the advisability of operation. The consensus of opinion in cases of renal tuberculosis with secondary vesical symptoms was that nephrectomy should be resorted to, unless there was the greatest contraindication to the operation. The secondary vesical tuberculosis would not improve until the diseased kidney was removed. He had had a case not very long ago, that of a man who came with a history of hæmaturia lasting a number of months. He had been in the Catskills for a number of years for laryngeal and pulmonary tuberculosis. Cystoscopy showed blood coming from the left kidney. The fundus of the bladder was distinctly indurated. There was contraction of both ureteral orifices, which had been recently stated to be a positive diagnostic point in renal tuberculosis. The man's tenesmus was so pronounced that, at Dr. Bierhoff's suggestion, Dr. Torek decided to remove the left kidney, which was the more diseased. Tubercle bacilli had been found in the separate urine from each kidney and in the urine from the bladder. The left kidney on removal was found to be of two or three times the normal size, containing a number of areas of cheesy degeneration, and its substance was riddled with tuberculous lesions. The recovery was uneventful. The patient was operated on five months ago, and at last reports was still living and comfortable. His vesical symptoms had almost entirely disappeared. Dr. Bierhoff mentioned this case simply to show the advisability of removing the more diseased kidney when that was shown to be the cause of the vesical trouble. He believed the condition of the patient might be much improved by the removal of the more diseased kidney in these cases. No other condition was so distressing and painful to the patient as vesical tuberculosis.

Dr. MARTIN WARE thought that if preliminary cystoscopy had been done there would have been no necessity for an additional suprapubic incision. He thought cystoscopy was justified in the greater number of cases of prostatic hypertrophy, provided the medium

could be made clear enough. If on cystoscopy a stone was found, suprapubic cystotomy would be indicated.

Dr. BERG said that Rovsing had reported good results in the treatment of the tuberculous bladder ulcers after the removal of the kidney, with irrigations of the bladder with a 5 per cent. solution of carbolic acid.

Dr. WARE said he had used Rovsing's method, and found that it caused alarming symptoms. The first case in which it was used was one of tuberculosis of the bladder, in which it was not known whether the trouble was of renal or prostatic origin. The bladder was markedly contracted. An injection of 150 c.c. was made, at a temperature of 103°, preceded by a wash of boric acid solution. An hour later the patient was in a marked condition of collapse, but rallied with the use of stimulants. He used it in another case of tuberculosis of the bladder, in which the diseased kidney had been removed and bladder symptoms persisted. The injection caused excruciating pain, both at the time and afterward. No improvement followed. He also mentioned the case of a girl, twelve years of age, from whom he had removed a tuberculous kidney, and in which he had to abandon the carbolic acid on account of extreme vesical tenesmus followed by hæmorrhage.

Dr. NYDEGGER was of the opinion that by the time our attention was called to a tuberculous condition of the kidney the ureter, bladder, and ureteral orifice were all infected, and that when the infected kidney was removed the infected ureter should be removed as well.

The CHAIRMAN thought that every vesical calculus complicated by prostatic hypertrophy should be approached through a suprapubic incision. He thought, however, that, as Dr. Fuller had removed the prostate through the perinaeum, it would have been better for the patient had he removed the stone also through that route. There was no need of dragging the stone through the prostatic urethra if it was too large to pass easily. The membranous and prostatic urethra having been opened into, and the prostate having been removed from around the urethra, as was Dr. Fuller's custom, it seemed to him that the stone would have come out easily. If not, it would have been better to crush it with the lithotrite or strong forceps inserted through the perineal opening, and remove the pieces. He had removed stones seven eighths of an inch in diameter through the perinaeum, without any urinary symptoms following. True, these were smooth and oval, but he had removed fairly rough stones half an inch in diameter, without having urinary complications follow, and he had removed from one hundred to one hundred and fifty pieces of stone through such an incision. These pieces of stone were in a case that he reported about a year ago of spontaneous rupture of a stone in the bladder. Two or three pieces of the stone were found in the urethra. A perineal section was done, the bladder was opened, and the pieces of stone were removed from the bladder. Shortly afterward the patient had pyelonephritis on the left side, following by perinephritic abscess. The abscess was opened and evacuated, and the wound healed. A short time ago the patient again came to the hospital, this time complaining of pain in the right side. He was examined with the cystoscope, and a small fragment of stone was seen in the bladder, possibly deposited since the operation a year ago or left behind at the time of that operation. The patient was operated upon, and the right kidney found to be greatly enlarged. It was pyonephrotic, and a large quantity of pus and urine was evacuated. The ureter was catheterized from above, and a stone was found two inches from the vesical end. The patient declined any further operation, and left the hospital with urine leaking from the right kidney. The amount of urine was measured, and

it was found that twice as much was secreted by the right as by the left kidney.

An Inhaler for Ethyl Chloride.—Dr. MORRIS STARK presented an inhaler that he had devised for the administration of ethyl chloride, alone or followed by ether, which was to be administered by the so called "drop method," this method being at present considered the safest form of ether administration. The ethyl chloride might be employed in this apparatus either in the form of breakable glass capsules, which were forced by pressure to discharge their contents into a rubber bag, or else an ethyl chloride spray might be allowed to enter the bag through the same inlet. The former method was by far the more convenient and just as economical, if not more so.

The apparatus consisted of a conical metallic face piece with a soft rubber detachable, inflatable rim piece. This conical face piece contained a circular wire net which was situated near the apex of the cone and formed with the apex a conical chamber into which were put the gauze discs which were to receive the drops of ether when necessary. Surmounting this conical face piece and readily detachable from it was a tubular chamber bent at a right angle. The horizontal portion fitted into the face piece without a screw and had at its extremity, just before it reached the face piece, a specially constructed valve, which in one extreme position admitted air from the side into the face piece, at the same time shutting off the bag, and vice versa in the other extreme position. The vertical position of the tubular chamber had entering its side obliquely another tube of much smaller calibre, bent at an obtuse angle, so as to become parallel with the vertical portion of the tube which it entered. Into this tube fitted the ethyl chloride capsules. Covering this small angular tube fitted snugly a long tubular cap which, when compressed, forced down the capsule, causing its thinly drawn out point to be broken by coming in contact with the internal surface of the angular portion of the tube into which the capsule had been forced.

Entering the lower extremity of the vertical portion of the tubular chamber was the bag holder, which consisted of two screens held apart by vertical rods. The upper screen, when the bag holder was inserted, passed well beyond the opening of the small capsule tube, which entered the side of the vertical portion of the larger tubular chamber. Its purpose was to prevent, when in position, the fragments of broken glass being inhaled by the patient, and when this screen was withdrawn, it dragged with it all fragments of glass that had accumulated, thus automatically cleaning the inhaler. The lower screen served the purpose of preventing broken glass from entering the bag and lacerating it. As had already been stated, this bag holder with its soft rubber bag and two screens attached, when withdrawn from the rest of the apparatus, effectively removed every fragment of broken glass that had accumulated in the apparatus.

The mode of employment of this apparatus is suggested by its structure. The capsule of ethyl chloride was inserted point downward into the small tube, the cap was placed over it, but not too tightly compressed, so as not, as yet, to fracture the tube of ethyl chloride. The valve near the face piece was placed so that the side window was wide open. This, as had been explained, effectively shut off the ethyl chloride chambers and bag from the face piece. The capsule was then broken by direct downward pressure upon the cap. This discharged the ethyl chloride into the bag, and it was confined there until it was wanted by the valve near the face piece. The face piece was then applied and the patient allowed to breathe air for a short time, say, one or two respirations. Then the valve was pushed to the other extreme, shutting off all out-

side air and presenting at the same time the ethyl chloride to the patient. At intervals the side window was more or less completely opened, allowing the patient to get air as occasion required. This was more economical than to remove the face piece without moving the valve, since then a great deal of the ethyl chloride escaped and was lost. If it was desired to follow the ethyl chloride with ether, the entire apparatus was detached at its junction with the face piece, and the anaesthesia proceeded with by dropping ether drop by drop through the hole at the top of the face piece on to the discs of gauze previously placed on the circular net within the face piece.

The average time required to put a patient well under the influence of the ethyl chloride with this apparatus was on the average about forty-five seconds. There was very little and most commonly no nausea following the administration of the ethyl chloride, and unless the ether had been kept up over fifteen minutes, seldom any nausea followed that.

Dr. Stark also exhibited his ether dropper, which was so constructed that its point could be used to puncture the solder at the top of the can, making an opening large enough to admit the conical screw which held the dropper in place in the can. Then by means of a valve the ether could be allowed to flow in drops or in a stream as desired, or else be entirely shut off.

Dr. WARE said that he had taken up the subject of ethyl chloride anaesthesia six or seven years ago. He had familiarized himself with all the methods, and was a warm advocate of its use in preference to nitrous oxide. It had been administered in three thousand cases under his supervision. The apparatus shown by Dr. Stark was a modification of one devised by Hewitt, of London. The anaesthesia was produced by the mixture of ethyl chloride and carbon dioxide. He had tabulated forty or fifty thousand cases recorded by different physicians and surgeons, and out of this number there was only one death really due to the anaesthetic.

Dr. STARK said it was not his intention to present this as an apparatus for a new method of the administration of the ethyl chloride; still, he presented it as a simplification of the many complex apparatuses that were on the market for the administration of highly volatile anaesthetics from capsules, and the arrangement of the apparatus so that the ethyl chloride could be succeeded by ether by the drop method was original in this apparatus.

Book Notices

The Dissociation of a Personality. A Biographical Study in Abnormal Psychology. By MORTON PRINCE, M. D., Professor of Diseases of the Nervous System, Tufts College Medical School; Physician for Diseases of the Nervous System, Boston City Hospital. New York: Longmans, Green, and Company, 1906.

We have here a curious borderland study in the shadowy realm of the subconscious, hypnotic suggestion, and multiple personality. The book is based upon the morbid psychical pranks of a pseudonymous "Miss Beauchamp" (which we are told is to be pronounced Beecham), a neurotic young person whose kaleidoscopic personalities have engaged the serious attention of the author throughout a volume of 561 pages with a promise of more to follow. It must be admitted that the minute and trivial details of this singular young woman's life rather bore the ordinary reader, and one is inclined to ask whether the painstaking observation and scholarly research so evident in the book might not have been bestowed with more valuable results upon a more important subject. Perhaps, however, as

Dr. Prince says in his preface, "Abnormal psychology is fast forging to the front as an important field of research. . . . The ground, however, has only been opened, and rich rewards await the investigator." For the reader who has a taste for personally conducted excursions into the land of *Weissnichtwo* this work will be of interest.

Die chirurgische Behandlung der Hämorrhoiden.

Eine klinische Sammelstudie von Dr. PAUL SCHLACHT, königlich-preussischer Assistenzarzt im 2. ostpreussischen Feldartillerie Regiment Nr. 52. Zweite Auflage. Königsberg: Gräfe & Unzer, 1904. Pp. 90. (Preis, M. 2.)

In this brief monograph the author has made a discriminating study of the literature of the surgical treatment of hæmorrhoids, and has indicated the methods which have been of most practical value to him in his experience as a military surgeon. In his own country the little volume has been sufficiently esteemed to quickly reach a second edition.

The Prevention and Cure of Tuberculosis. A Collection of Articles of a Popular Character on the Subject of Tuberculosis. Compiled by JOSEPH R. LONG. Denver: H. M. Brinker, 1905. Pp. 246. (Price, \$1.25.)

In this little volume are collected a number of papers and addresses, most of which have been previously published to swell the popular literature on the hygienic treatment and prophylaxis of tuberculous disease. The well known prize essay of Dr. Knopf is included along with articles by Dr. J. H. Huddleston, Dr. H. P. Loomis, and others. The information imparted is sound and, although now for the most part trite and familiar to the educated public, will bear repetition.

Miscellany.

Dr. William E. Swan.—At a meeting of the Medical Association of the Greater City of New York, held March 12, 1906, the following report was presented and adopted: The Medical Association of the Greater City of New York has learned with the deepest regret of the death of its associate, Dr. William E. Swan. Although resident in New York only a little over a year, Dr. Swan, by his attractive personality, his conscientious attention to his professional duties, and his high scientific ideal, endeared himself to those with whom he came in contact. It is recommended by your committee that the sympathy of the society be extended to his sisters and that this note be entered on the minutes.

Dr. Emmet Cooper Dent.—At a meeting of the Medical Association of the Greater City of New York, held March 12, 1906, the following report was presented and adopted: It is with profound regret that your committee record the sudden death on January 12, 1906, of Dr. Emmet Cooper Dent, a fellow of this association. Dr. Dent was born in Macon, Miss., in 1857. He began the study of medicine at the University of Virginia and completed his course at Bellevue Hospital Medical College, New York, in 1879. He was thereupon appointed on the medical staff of the New York City Lunatic Asylum on Blackwell's Island. He was promoted to the office of assistant medical superintendent in December, 1882, and was appointed superintendent in December, 1886. In February, 1896, Dr. Dent was transferred to Ward's Island, where he served as superintendent of the female department of the Manhattan State Hospital. On June 1, 1905, the two departments were consolidated, and he was made superintendent and treasurer of the entire hospital, an in-

stitution of more than four thousand beds—the largest and most modern of its kind in the whole country. To Dr. Dent is due the credit of many advances in the care and treatment of the insane. He was the first to introduce and develop hydrotherapy as a means of treatment in such cases, almost to the entire exclusion of medicines. He also introduced camp life for the acute insane, and the use of music and of special diversions, dancing, out of door sports, and other amusements. He developed the continuous bath to its greatest efficiency. He advocated advanced surgical care and treatment, and operative procedures, especially on the female insane. Under his administration clinics have been introduced in psychiatry, gynecology, surgery, heart disease, genitourinary diseases, and gastrointestinal diseases, and investigations into epilepsy, paresis, and autoinfection have been instituted. He was the author of numerous articles on insanity. He personally gave many clinical lectures on the various types and manifestations of insanity, and organized his staff of thirty physicians into a society for the advanced study of psychiatry. He devoted his life to the study of insanity and to the care and treatment of the insane, and for this unfortunate class he sacrificed every personal interest. A widow and two daughters survive him. *Whereas*, Death has suddenly removed from our midst, our fellow member, whose example of unselfish devotion and whose exceptional administrative ability excite our admiration, and whose sterling character and urbanity made him dear to all who knew him; therefore be it *Resolved*, That we extend to the bereaved family our heartfelt sympathy in their grief, and the assurance that his memory will ever be held dear by us; and be it further *Resolved*, That these resolutions be entered on our minutes, and a copy sent to the family.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the week ending March 23, 1906:

Smallpox—United States.				
Places.	Date.	Cases.	Deaths.	
California—San Francisco	Mar. 3-10	7		
Delaware—Wilmington	Mar. 10-17	3		
Florida—Jacksonville	Mar. 10-17	7		
Georgia—Augusta	Mar. 12-19	2		
Indiana—Indianapolis	Mar. 11-18	1		
Louisiana—New Orleans	Mar. 10-17	12		
Louisiana—Shreveport	Mar. 10-17	1		
Maine—Baldwin	Mar. 10-17	6		
Maryland—Baltimore	Mar. 10-17	5		
Missouri—St. Louis	Mar. 10-17	3		
Montana—Broadwater County	Feb. 1-28	2		
Montana—Lewis and Clark Co.	Feb. 1-28	1		
Montana—Missoula County	Feb. 1-28	2		
Montana—Silver Bow County	Feb. 1-28	1		
New York—Buffalo	Mar. 10-17	1		
North Carolina—19 counties	Dec. 1-31	374		
North Carolina—23 counties	Jan. 1-31	438		
Ohio—Cincinnati	Mar. 9-16	3		
Ohio—Hamilton	Feb. 10-17	1		
Tennessee—Knoxville	Mar. 10-17	1		
Tennessee—Memphis	Mar. 3-17	5		
West Virginia—Wheeling	Mar. 10-17	6		
Wisconsin—Appleton	Mar. 10-17	2		
Wisconsin—Beloit	Mar. 3-10	1		
Wisconsin—Milwaukee	Mar. 3-17	3		
Smallpox—Foreign.				
Africa—Cape Town	Jan. 27-Feb. 10	7		
Brazil—Rio de Janeiro	Feb. 11-18	3		
Canada—Grand Falls, N. B.	Mar. 15	18		
Canada—Winnipeg	Mar. 3-10	1		
Germany—Bremen	Feb. 24-Mar. 3	1		
Germany—Cologne	Feb. 25-Mar. 4	9		
Great Britain—Leeds	Mar. 3-10	1		
Great Britain—London	Feb. 17-Mar. 3	4		
Greece—Athens	Feb. 6-20	7		
India—Calcutta	Feb. 3-10	1		
India—Kanchi	Feb. 11-18	23		
India—Madras	Feb. 10-16	26		
India—Rangoon	Feb. 3-10	26		
Malta	Feb. 18-24	1		

Mexico—Tuxpam	Feb. 27-Mar. 6.....	5	
Netherlands—Rotterdam	Feb. 25-Mar. 3.....	1	
Russia—Moscow	Feb. 10-24.....	22	
Russia—Odessa	Feb. 17-Mar. 3.....	25	
Russia—St. Petersburg	Feb. 17-24.....	4	
Spain—Barcelona	Feb. 19-Mar. 1.....	6	
Spain—Tarragona	Feb. 25-Mar. 3.....	1	
Texas—Austin	Feb. 17-24.....	15	
Texas—Houston	Feb. 18-25.....	2	
Uruguay—Montevideo	Dec. 1-31.....	1	
<i>Total.</i>			
Mexico—Merida	Feb. 24-Mar. 3.....	2	3
<i>Total.</i>			
Philippine Islands—Manila	Jan. 20-27.....	3	2
Philippine Islands—Provincias	Jan. 20-27.....	348	247
<i>Total.</i>			
Brazil—Rio de Janeiro	Feb. 11-18.....	5	1
India—General	Jan. 27-Feb. 10, 13, 23, 26.....	10,932	
India—Calcutta	Feb. 3-10.....	30	
India—Bombay	Feb. 11-18.....	6	
India—Madras	Feb. 13-19.....	9	
India—Rangoon	Feb. 3-10.....	20	

Public Health and Marine Hospital Service:

List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending March 21, 1906:

- AUSTIN, H. W., Surgeon. Granted four months' leave of absence from March 28, 1906, with permission to go beyond sea.
- BOGESS, J. S., Assistant Surgeon. Relieved from duty at Cape Charles Quarantine Station and directed to proceed to Stapleton, N. Y., reporting to the Medical Officer in Command for duty and assignment to quarters.
- COLLINS, George L., Assistant Surgeon. Relieved from duty at Reedy Island Quarantine Station and directed to proceed to Cape Charles Quarantine Station and assume command of the Service.
- DE VALIN, HUGH, Assistant Surgeon. Relieved from duty at Baltimore, Md., and directed to proceed to Reedy Island Quarantine Station, reporting to the Medical Officer in Command for duty and assignment to quarters.
- LAVINDER, C. H., Passed Assistant Surgeon. Relieved from duty at Stapleton, N. Y., and directed to proceed to Detroit, Mich., and assume temporary command of Service during the absence of Surgeon H. W. Austin.
- LONG, H. D., Assistant Surgeon. Granted leave of absence for seven days from March 10, 1906, under Par. 191 of the Regulations.
- McKAY, MALCOLM, Pharmacist. Granted one day's leave of absence, March 15, 1906.
- PRIMROSE, R. S., Acting Assistant Surgeon. Granted leave of absence for 30 days from March 18, 1906.
- WICKES, K. W., Passed Assistant Surgeon. Leave of absence granted Passed Assistant Surgeon Wickes for two days, from March 16, 1906, revoked.
- YOUNG.—G. B., Passed Assistant Surgeon. Directed to report to Assistant Surgeon General W. J. Pettus, chairman of board of examiners, April 2, 1906, at Washington, D. C., to determine his fitness for promotion to grade of surgeon.

Board Convened.

A board of medical officers was convened to meet in Baltimore, Md., March 21, 1906, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: Surgeon L. L. Williams, Chairman; Assistant Surgeon W. H. Frost, Recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending March 24, 1906:

- CARROLL, JAMES, First Lieutenant and Assistant Surgeon. Detailed to represent the Medical Department of the Army at the annual meeting of the Louisiana State Medical Society, New Orleans, La., from May 8 to 10, 1906.
- CARSWELL, R. L., First Lieutenant and Assistant Surgeon. Having reported arrival at San Francisco, Cal., will proceed to and take station at Depot of Recruits and

Casuals, Fort McDowell, Angel Island, Cal.; granted thirty days' leave of absence.

- CHAMBERLAIN, W. P., Captain and Assistant Surgeon. Having reported arrival at San Francisco, Cal., ordered to proceed to and take station at Jackson Barracks, La.
- GANDY, CHARLES M., Major and Surgeon. Relieved from duty at Fort Wayne, Mich., and ordered to West Point, N. Y., for duty, to relieve Lieutenant Colonel H. O. Perley, Deputy Surgeon General.
- GAPEN, NELSON, First Lieutenant and Assistant Surgeon. Relieved from duty at Depot of Recruits and Casuals, Angel Island, Cal., and ordered to Columbus Barracks, Ohio, for duty.
- HALL, JOHN D., Colonel and Assistant Surgeon General. Retired from active service on March 17, 1906.
- LITTLE, WILLIAM L., First Lieutenant and Assistant Surgeon. Relieved from duty at Jackson Barracks, La., and ordered to Fort Sam Houston, Texas, for duty.
- PERLEY, H. O., Lieutenant Colonel and Deputy Surgeon General. Relieved from duty at the United States Military Academy, West Point, N. Y., and ordered to the Philippine Islands, where, upon arrival, he will report to the commanding general of the Philippines Division for assignment to duty.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending March 24, 1906:

- BROWN, E. M., Passed Assistant Surgeon. Orders of March 5th revoked; detached from the Naval Medical School, Washington, D. C., and ordered home to await orders.
- CAMPBELL, F. E., Assistant Surgeon. Detached from the *Newport* and ordered home to await orders.
- COHN, I. F., Assistant Surgeon. Ordered to the Naval Hospital, Norfolk, Va.
- FLINT, J., Assistant Surgeon. Ordered to the *Franklin*.
- GRIEVE, C. C., Assistant Surgeon. Detached from the *Frolic* and ordered to the *Wilmington*.
- ZALESKY, W. J., Assistant Surgeon. Detached from the *Yankee* and ordered to the *New York*.

Births, Marriages, and Deaths.

Married.

THOMAS—EARL.—In San Francisco, California, on Wednesday, March 14th, Dr. C. N. Thomas and Miss Josephine M. Earl.

Died.

CARPENTER.—In Burlington, Vermont, on Tuesday, March 20th, Dr. Benjamin Walter Carpenter, aged sixty-nine years.

DAVIS.—In Philadelphia, on Friday, March 23rd, Dr. Arthur H. Davis, aged sixty-three years.

DIEBOLD.—In New Orleans, on Thursday, March 15th, Dr. Christian B. Diebold, aged forty-three years.

DOREMUS.—In New York, on Friday, March 23rd, Dr. Robert Ogden Doremus, aged eighty-two years.

FINCKE.—In Brooklyn, N. Y., on Monday, March 19th, Dr. Charles Louis Fincke, aged thirty-three years.

FREEMAN.—In Albany, N. Y., on Thursday, March 15th, Dr. Samuel H. Freeman, aged eighty-six years.

MCGREGOR.—In Denver, Colorado, on Thursday, March 22d, Dr. Jessie M. McGregor.

NILES.—In Philadelphia, on Friday, March 16th, Dr. William G. Niles.

RICE.—In Buffalo, on Sunday, March 18th, Dr. Leverett H. Rice, aged seventy years.

RILEY.—In Malden, Massachusetts, on Friday, March 16th, Dr. William N. Riley, aged twenty-eight years.

ROACH.—In Alliance, Ohio, on Monday, March 19th, Dr. Jason B. Roach, aged seventy-seven years.

SKELTON.—In Chicago, on Wednesday, March 14th, Dr. Leonard L. Skelton, aged forty-three years.

WENNERBERG.—In Boston, on Saturday, March 17th, Dr. Francis J. Wennerberg, aged thirty-seven years.

R
ll
I65
v.83
no.1-13
Biological
& Medical
Serials

International record of
medicine

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY
